
26dB Bandwidth and 99% Occupied Bandwidth

Test place UL Japan, Inc. Shonan EMC Lab. No.6 Shielded Room
Date 2010/12/3
Temperature / Humidity 24deg.C. , 46%
Engineer Akio Hayashi
Mode 11a, 6Mbps, Antenna 3

Frequency [MHz]	26dB Bandwidth [MHz]	99% Occupied Bandwidth [MHz]
5180	22.633	17.363
5200	22.176	17.376
5240	22.817	17.510

UL Japan, Inc.**Shonan EMC Lab.**

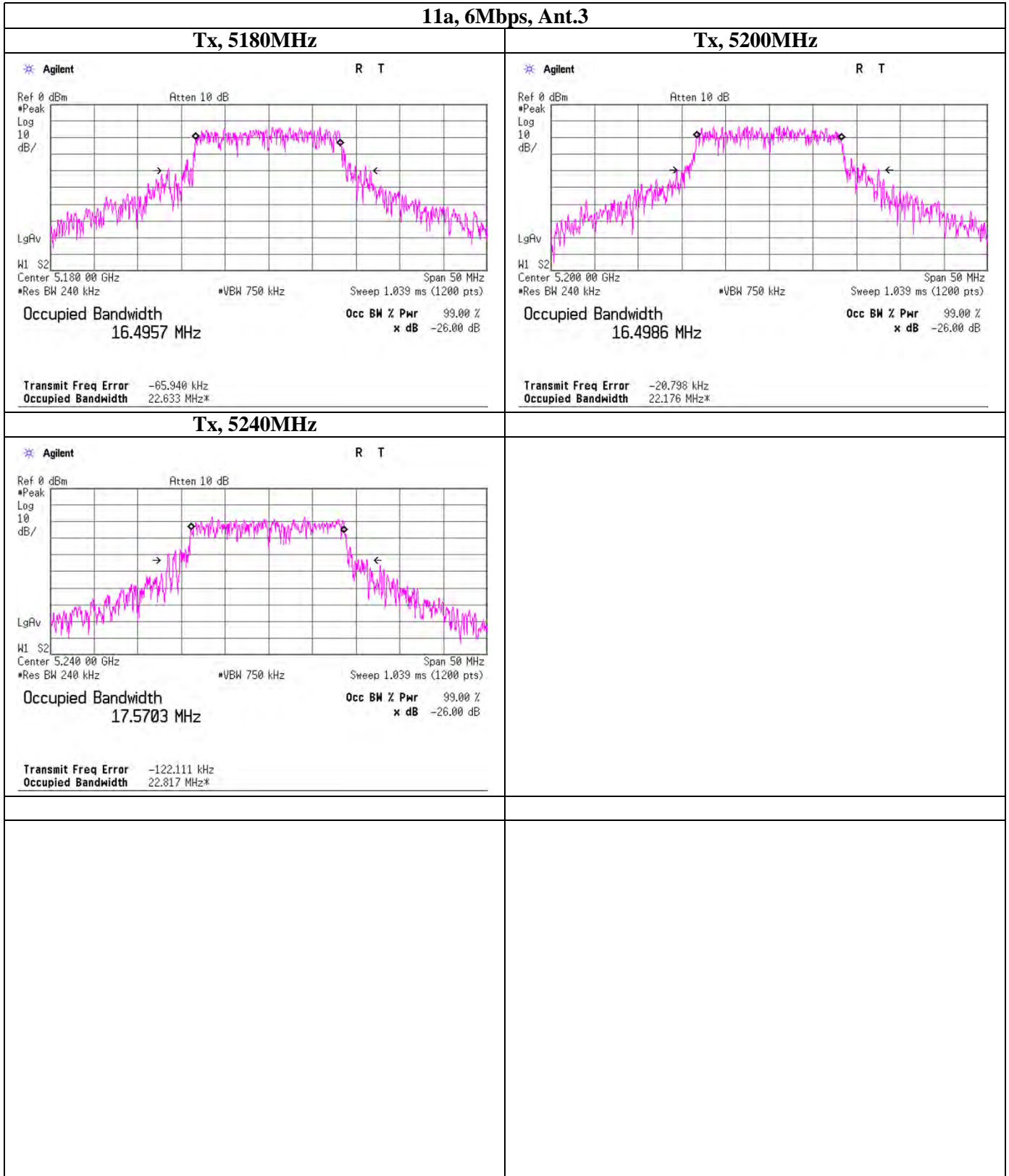
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

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Facsimile : +81 463 50 6401

26dB Bandwidth

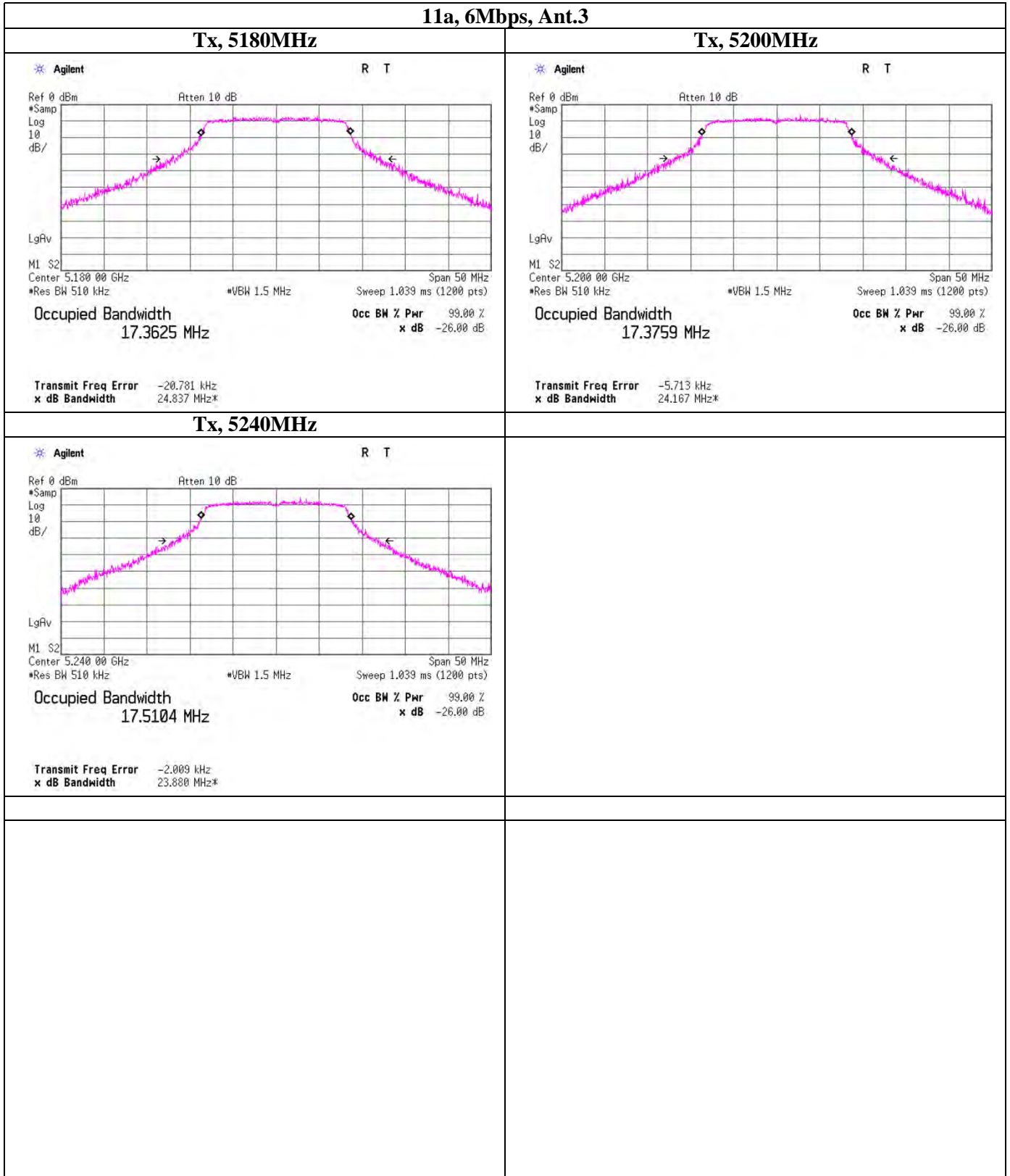
11a, 6Mbps, Ant.3



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99% Occupied Bandwidth



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26dB Bandwidth

11n(20HT), MCS0, Ant.1+Ant.2+Ant.3	
Tx, 5180MHz	Tx, 5200MHz
<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>Center 5.180 00 GHz Span 50 MHz #Res BW 220 kHz #VBW 680 kHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 17.8243 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -12.152 kHz Occupied Bandwidth 21.305 MHz*</p>	<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>Center 5.200 00 GHz Span 50 MHz #Res BW 220 kHz #VBW 680 kHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 17.8756 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 49.086 kHz x dB Bandwidth 21.450 MHz*</p>
<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>Center 5.240 00 GHz Span 50 MHz #Res BW 220 kHz #VBW 680 kHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 17.8482 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 40.439 kHz Occupied Bandwidth 21.286 MHz*</p>	Empty space for the second plot in this row

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26dB Bandwidth

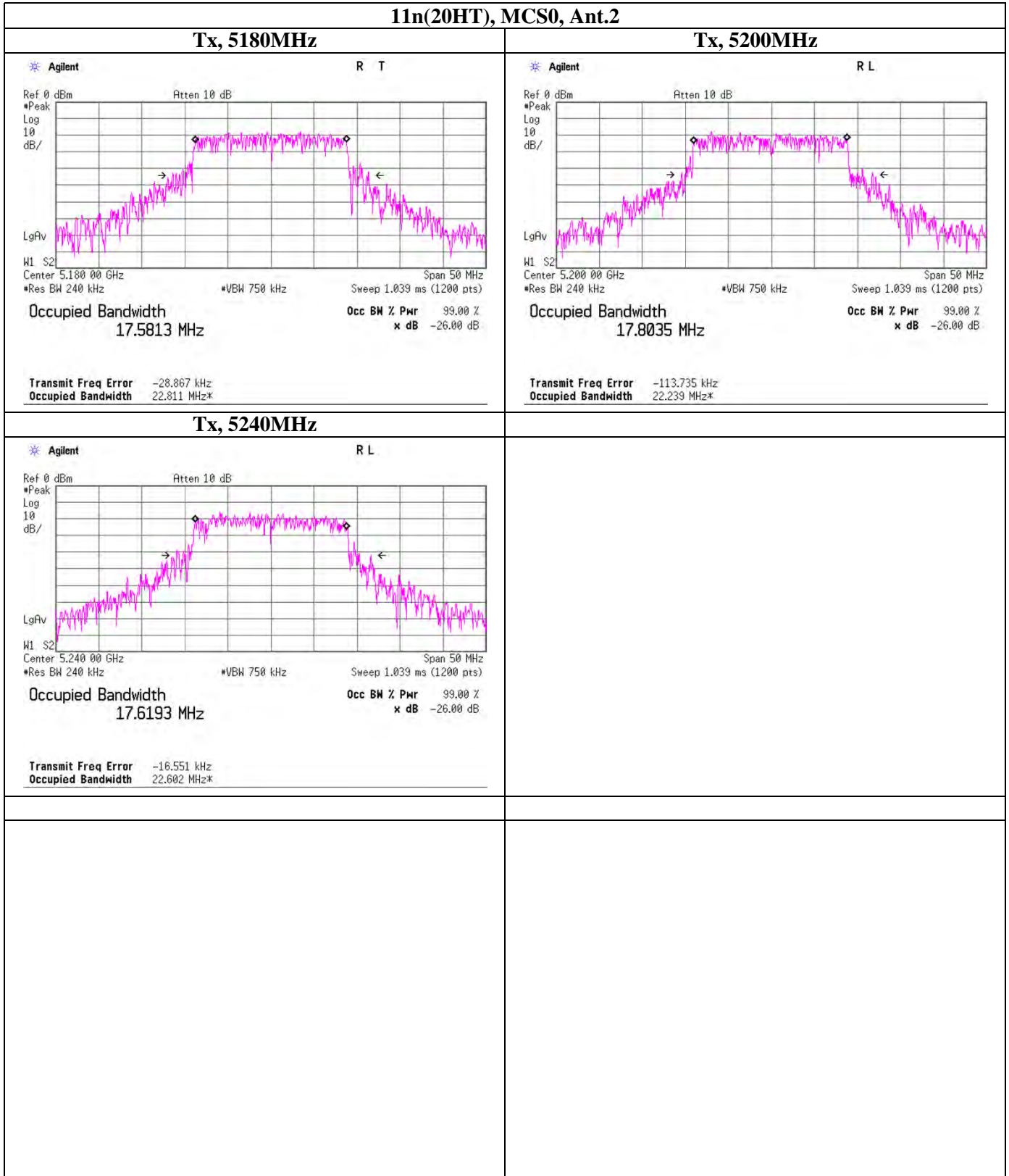
11n(20HT), MCS0, Ant.1

Tx, 5180MHz	Tx, 5200MHz
<p style="text-align: center;">* Agilent R T</p> <p style="text-align: center;">Occupied Bandwidth 17.7970 MHz</p> <p style="text-align: center;">Occ BW % PMR 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -107.195 kHz x dB Bandwidth 22.222 MHz*</p>	<p style="text-align: center;">* Agilent R T</p> <p style="text-align: center;">Occupied Bandwidth 17.7013 MHz</p> <p style="text-align: center;">Occ BW % PMR 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -36.625 kHz Occupied Bandwidth 23.023 MHz*</p>
<p style="text-align: center;">Tx, 5240MHz</p> <p style="text-align: center;">* Agilent R T</p> <p style="text-align: center;">Occupied Bandwidth 17.5703 MHz</p> <p style="text-align: center;">Occ BW % PMR 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -122.111 kHz Occupied Bandwidth 22.817 MHz*</p>	Empty space for the second column in this row

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26dB Bandwidth



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26dB Bandwidth

11n(20HT), MCS0, Ant.3

Tx, 5180MHz	Tx, 5200MHz
<p style="text-align: center;">* Agilent R T</p> <p style="text-align: center;">Occupied Bandwidth 17.7233 MHz</p> <p style="text-align: center;">Occ BM % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -12.843 kHz Occupied Bandwidth 22.435 MHz*</p>	<p style="text-align: center;">* Agilent R T</p> <p style="text-align: center;">Occupied Bandwidth 17.7086 MHz</p> <p style="text-align: center;">Occ BM % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -104.873 kHz Occupied Bandwidth 22.795 MHz*</p>
<p style="text-align: center;">* Agilent R T</p> <p style="text-align: center;">Occupied Bandwidth 17.6230 MHz</p> <p style="text-align: center;">Occ BM % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -26.930 kHz Occupied Bandwidth 22.415 MHz*</p>	Empty plot area

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99% Occupied Bandwidth

11n(20HT), MCS0, Ant.1	
Tx, 5180MHz	Tx, 5200MHz
<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>#Samp Log 10 dB/</p> <p>LgAv</p> <p>M1 S2 Center 5.180 00 GHz Span 50 MHz #Res BW 510 kHz #VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.2925 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -73.705 kHz x dB Bandwidth 24.828 MHz*</p>	<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>#Samp Log 10 dB/</p> <p>LgAv</p> <p>M1 S2 Center 5.200 00 GHz Span 50 MHz #Res BW 510 kHz #VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.3917 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -9.436 kHz x dB Bandwidth 25.488 MHz*</p>
<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>#Samp Log 10 dB/</p> <p>LgAv</p> <p>M1 S2 Center 5.240 00 GHz Span 50 MHz #Res BW 510 kHz #VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.2614 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -78.042 kHz x dB Bandwidth 24.599 MHz*</p>	This cell is empty in the original image

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99% Occupied Bandwidth

11n(20HT), MCS0, Ant.2	
<p style="text-align: center;">Tx, 5180MHz</p> <p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv</p> <p>M1 S2 Center 5.180 00 GHz Span 50 MHz *Res BW 510 kHz *VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.2600 MHz</p> <p>Occ BN % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -42.882 kHz x dB Bandwidth 25.133 MHz*</p>	<p style="text-align: center;">Tx, 5200MHz</p> <p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv</p> <p>M1 S2 Center 5.200 00 GHz Span 50 MHz *Res BW 510 kHz *VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.2202 MHz</p> <p>Occ BN % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -22.664 kHz x dB Bandwidth 25.033 MHz*</p>
<p style="text-align: center;">Tx, 5240MHz</p> <p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv</p> <p>M1 S2 Center 5.240 00 GHz Span 50 MHz *Res BW 510 kHz *VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.2570 MHz</p> <p>Occ BN % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -53.341 kHz x dB Bandwidth 24.685 MHz*</p>	

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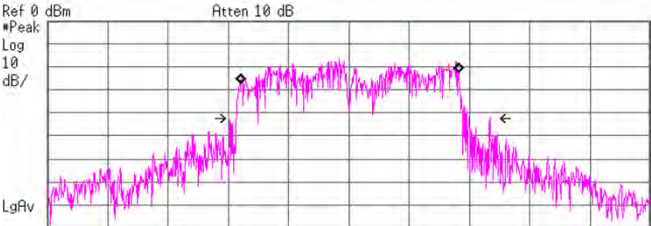

99% Occupied Bandwidth

11n(20HT), MCS0, Ant.3	
Tx, 5180MHz	Tx, 5200MHz
<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>*Samp Log 10 dB/ LgAv</p> <p>M1 S2 Center 5.180 00 GHz Span 50 MHz *Res BW 510 kHz *VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.3323 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -1.081 kHz x dB Bandwidth 25.055 MHz*</p>	<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>*Samp Log 10 dB/ LgAv</p> <p>M1 S2 Center 5.200 00 GHz Span 50 MHz *Res BW 510 kHz *VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.3698 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -444.593 Hz x dB Bandwidth 25.447 MHz*</p>
<p style="text-align: center;">* Agilent R T</p> <p>Ref 0 dBm Atten 10 dB</p> <p>*Samp Log 10 dB/ LgAv</p> <p>M1 S2 Center 5.240 00 GHz Span 50 MHz *Res BW 510 kHz *VBW 1.5 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 18.4440 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 3.216 kHz x dB Bandwidth 26.120 MHz*</p>	Empty space for the second column in this row

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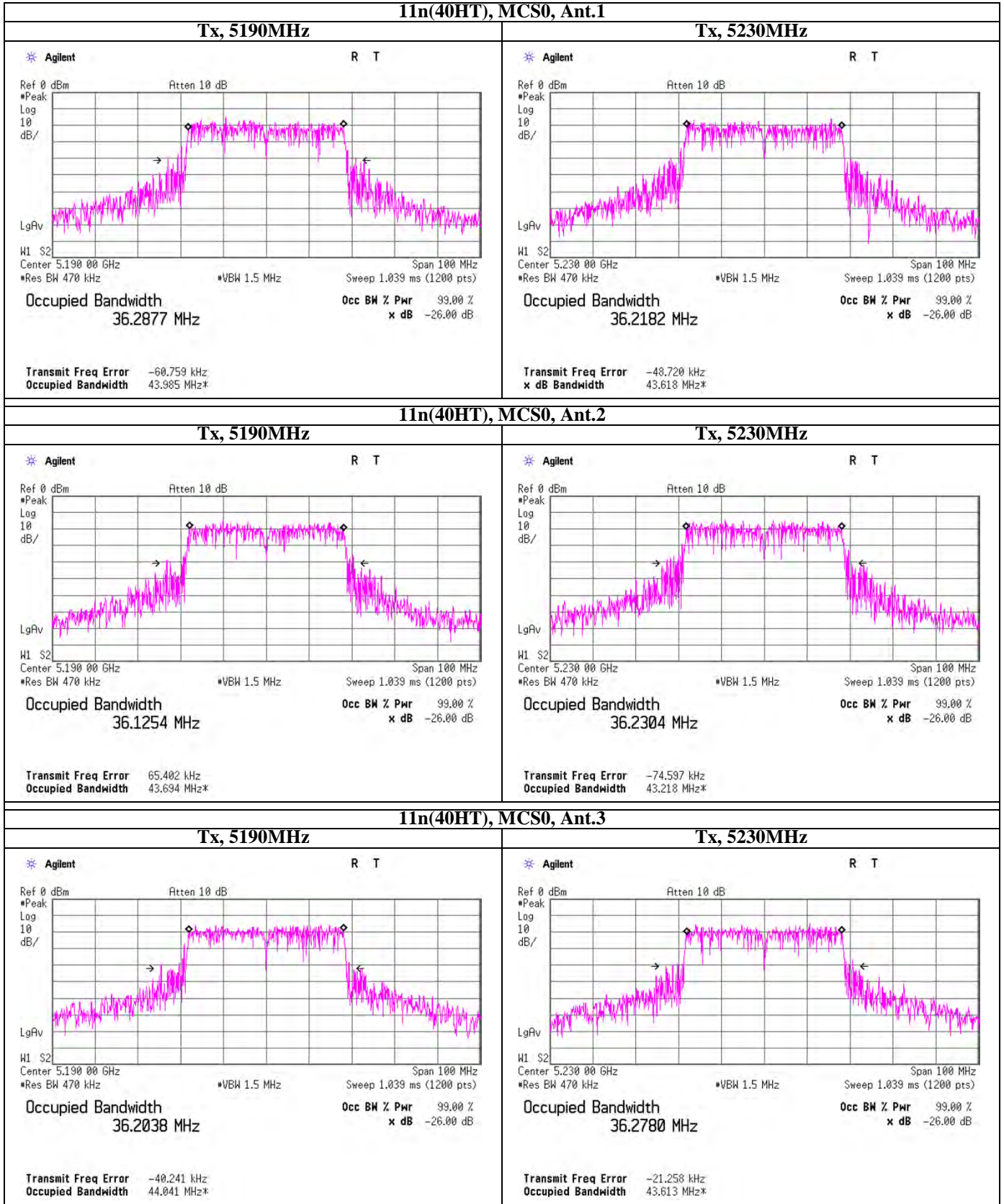
26dB Bandwidth

11n(40HT), MCS0, Ant.1+Ant.2+Ant.3	
Tx, 5190MHz	Tx, 5230MHz
<p style="text-align: center;">* Agilent R T</p> <p style="text-align: center;">Atten 10 dB</p>  <p> Ref 0 dBm #Peak Log 10 dB/ LgAv W1 S2 Center 5.190 00 GHz #Res BW 430 kHz #VBW 1.3 MHz Sweep 1.039 ms (1200 pts) Span 100 MHz </p> <p> Occupied Bandwidth 36.1612 MHz </p> <p> Occ BW % Pwr 99.00 % x dB -26.00 dB </p> <p> Transmit Freq Error 167.023 kHz Occupied Bandwidth 42.111 MHz* </p>	<p style="text-align: center;">* Agilent R T</p> <p style="text-align: center;">Atten 10 dB</p>  <p> Ref 0 dBm #Peak Log 10 dB/ LgAv W1 S2 Center 5.230 00 GHz #Res BW 430 kHz #VBW 1.3 MHz Sweep 1.039 ms (1200 pts) Span 100 MHz </p> <p> Occupied Bandwidth 36.3028 MHz </p> <p> Occ BW % Pwr 99.00 % x dB -26.00 dB </p> <p> Transmit Freq Error 92.271 kHz Occupied Bandwidth 42.073 MHz* </p>

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26dB Bandwidth

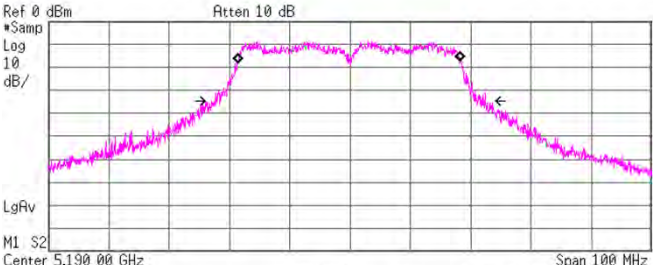
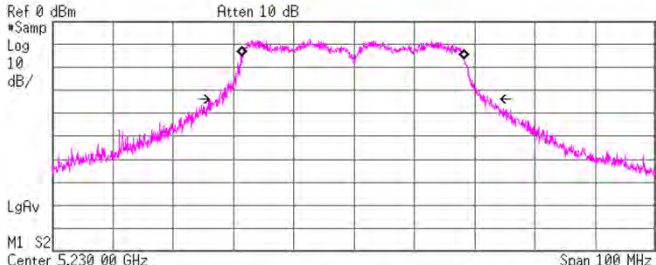


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99% Occupied Bandwidth

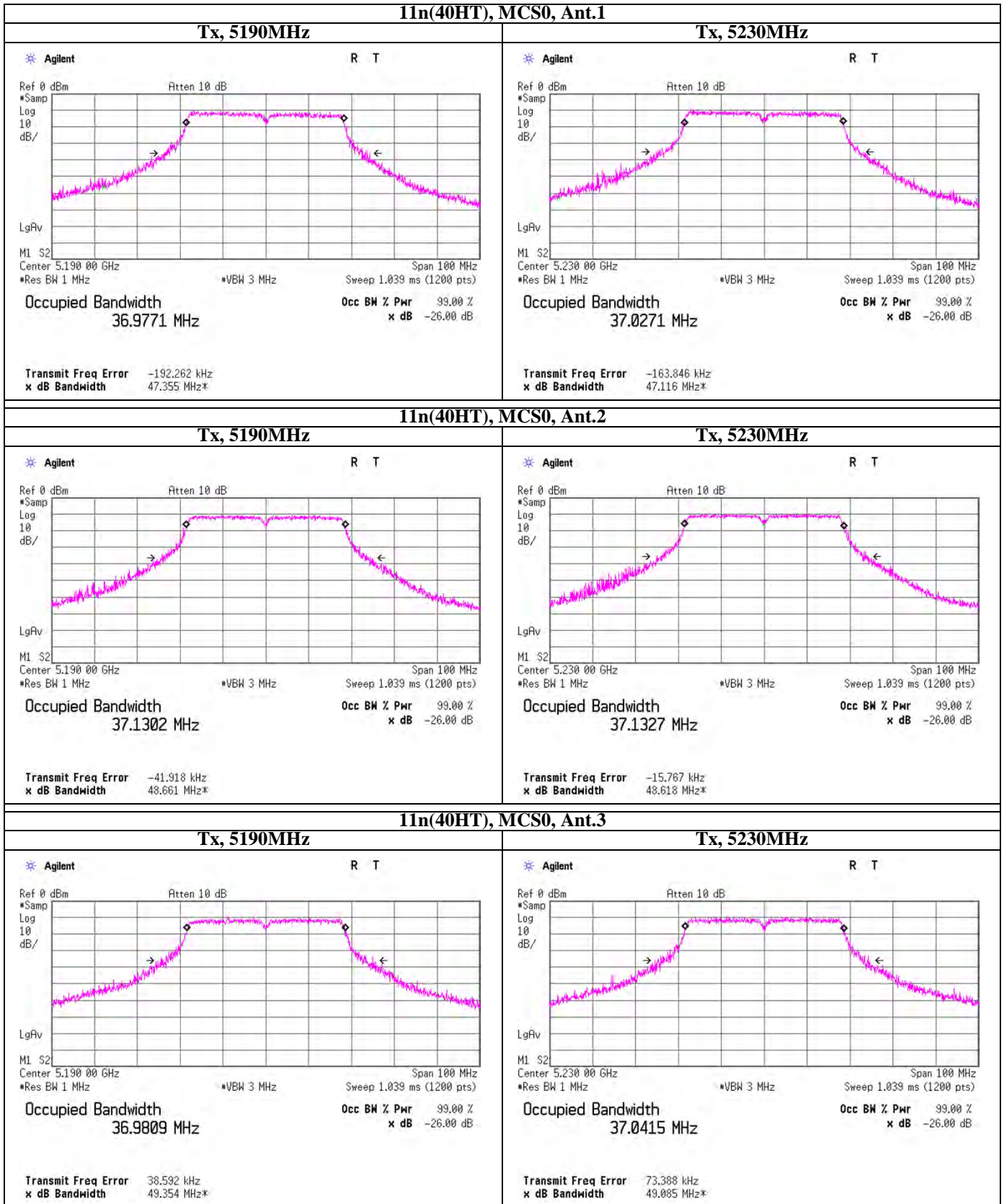
11n(40HT), MCS0, Ant.1+Ant.2+Ant.3

Tx, 5190MHz	Tx, 5230MHz
<p>Agilent R T</p>  <p>Ref 0 dBm *Samp Log 10 dB/ LgRv</p> <p>Center 5.190 00 GHz *Res BW 1 MHz #VBW 3 MHz Span 100 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 36.9330 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -133.911 kHz x dB Bandwidth 44.757 MHz*</p>	<p>Agilent R T</p>  <p>Ref 0 dBm *Samp Log 10 dB/ LgRv</p> <p>Center 5.230 00 GHz *Res BW 1 MHz #VBW 3 MHz Span 100 MHz Sweep 1.039 ms (1200 pts)</p> <p>Occupied Bandwidth 36.9457 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -204.630 kHz x dB Bandwidth 44.904 MHz*</p>

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99% Occupied Bandwidth



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Peak Output Power (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date 2010/11/30
 Temperature / Humidity 24deg.C. ,35%
 Engineer Tatsuya Arai
 Mode 11a, Tx

Ant1

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5180.0	-2.21	2.20	10.00	9.99	9.98	16.99	50	7.00
Mid	5200.0	-2.21	2.23	10.00	10.02	10.05	16.99	50	6.97
High	5240.0	-1.47	2.29	10.00	10.82	12.08	16.99	50	6.17

Ant2

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5180.0	-2.24	2.20	10.00	9.96	9.91	16.99	50	7.03
Mid	5200.0	-2.44	2.23	10.00	9.79	9.53	16.99	50	7.20
High	5240.0	-2.14	2.29	10.00	10.15	10.35	16.99	50	6.84

Ant3

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5180.0	-1.18	2.20	10.00	11.02	12.65	16.99	50	5.97
Mid	5200.0	-1.83	2.23	10.00	10.40	10.96	16.99	50	6.59
High	5240.0	-1.91	2.29	10.00	10.38	10.91	16.99	50	6.61

Sample Calculation:

Result = Reading + Cable Loss + Atten. Loss

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

*The test result is rounded off to one or two decimal places, so some differences might be observed.

[Pre check]

11a

Data Rate [Mbps]	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
6	5180.0	-1.18	2.20	10.00	11.02	12.65	16.99	50	5.97
9	5180.0	-1.34	2.20	10.00	10.86	12.19	16.99	50	6.13
12	5180.0	-1.46	2.20	10.00	10.74	11.86	16.99	50	6.25
18	5180.0	-1.43	2.20	10.00	10.77	11.94	16.99	50	6.22
24	5180.0	-1.34	2.20	10.00	10.86	12.19	16.99	50	6.13
36	5180.0	-1.34	2.20	10.00	10.86	12.19	16.99	50	6.13
48	5180.0	-1.32	2.20	10.00	10.88	12.25	16.99	50	6.11
54	5180.0	-1.29	2.20	10.00	10.91	12.33	16.99	50	6.08

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Peak Output Power (Conducted)

11a	
Ant1, 5180MHz	Ant2, 5180MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.180 00 GHz *Res BW 1 MHz</p> <p style="text-align: center;">Atten 10 dB</p> <p style="text-align: right;">Span 40 MHz Sweep 1 ms (601 pts)</p> <p style="text-align: center;">*VBW 3 MHz</p> <p>Channel Power -2.21 dBm /25.0000 MHz</p> <p>Power Spectral Density -76.19 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.180 00 GHz *Res BW 1 MHz</p> <p style="text-align: center;">Atten 10 dB</p> <p style="text-align: right;">Span 40 MHz Sweep 1 ms (601 pts)</p> <p style="text-align: center;">*VBW 3 MHz</p> <p>Channel Power -2.24 dBm /25.0000 MHz</p> <p>Power Spectral Density -76.21 dBm/Hz</p>
Ant1, 5200MHz	Ant2, 5200MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.200 00 GHz *Res BW 1 MHz</p> <p style="text-align: center;">Atten 10 dB</p> <p style="text-align: right;">Span 40 MHz Sweep 1 ms (601 pts)</p> <p style="text-align: center;">*VBW 3 MHz</p> <p>Channel Power -2.21 dBm /25.0000 MHz</p> <p>Power Spectral Density -76.19 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.200 00 GHz *Res BW 1 MHz</p> <p style="text-align: center;">Atten 10 dB</p> <p style="text-align: right;">Span 40 MHz Sweep 1 ms (601 pts)</p> <p style="text-align: center;">*VBW 3 MHz</p> <p>Channel Power -2.44 dBm /25.0000 MHz</p> <p>Power Spectral Density -76.42 dBm/Hz</p>
Ant1, 5240MHz	Ant2, 5240MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.240 00 GHz *Res BW 1 MHz</p> <p style="text-align: center;">Atten 10 dB</p> <p style="text-align: right;">Span 40 MHz Sweep 1 ms (601 pts)</p> <p style="text-align: center;">*VBW 3 MHz</p> <p>Channel Power -1.47 dBm /25.0000 MHz</p> <p>Power Spectral Density -75.45 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.240 00 GHz *Res BW 1 MHz</p> <p style="text-align: center;">Atten 10 dB</p> <p style="text-align: right;">Span 40 MHz Sweep 1 ms (601 pts)</p> <p style="text-align: center;">*VBW 3 MHz</p> <p>Channel Power -2.14 dBm /25.0000 MHz</p> <p>Power Spectral Density -76.12 dBm/Hz</p>

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Peak Output Power (Conducted)

11a	
Ant3, 5180MHz	
<p>✧ Agilent</p> <p>Channel Power -1.18 dBm /25.0000 MHz</p> <p>Power Spectral Density -75.16 dBm/Hz</p>	
Ant3, 5200MHz	
<p>✧ Agilent</p> <p>Channel Power -1.83 dBm /25.0000 MHz</p> <p>Power Spectral Density -75.80 dBm/Hz</p>	
Ant3, 5240MHz	
<p>✧ Agilent</p> <p>Channel Power -1.91 dBm /25.0000 MHz</p> <p>Power Spectral Density -75.89 dBm/Hz</p>	

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Peak Output Power (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date 2010/11/30
 Temperature / Humidity 24deg.C. ,35%
 Engineer Tatsuya Arai
 Mode 11n-20, Tx

Ant1+Ant2+Ant3

Ch	Freq. [MHz]	Ant1 Result [mW]	Ant2 Result [mW]	Ant3 Result [mW]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5180.0	4.53	4.49	5.92	11.74	14.93	16.99	50	5.25
Mid	5200.0	4.14	4.52	5.56	11.53	14.22	16.99	50	5.46
High	5240.0	4.45	4.93	5.82	11.82	15.20	16.99	50	5.17

Ant1

Ch	Freq. [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5180.0	-5.64	2.20	10.00	6.56	4.53	16.99	50	10.43
Mid	5200.0	-6.06	2.23	10.00	6.17	4.14	16.99	50	10.82
High	5240.0	-5.81	2.29	10.00	6.48	4.45	16.99	50	10.51

Ant2

Ch	Freq. [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5180.0	-5.68	2.20	10.00	6.52	4.49	16.99	50	10.47
Mid	5200.0	-5.68	2.23	10.00	6.55	4.52	16.99	50	10.44
High	5240.0	-5.36	2.29	10.00	6.93	4.93	16.99	50	10.06

Ant3

Ch	Freq. [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5180.0	-4.48	2.20	10.00	7.72	5.92	16.99	50	9.27
Mid	5200.0	-4.78	2.23	10.00	7.45	5.56	16.99	50	9.54
High	5240.0	-4.64	2.29	10.00	7.65	5.82	16.99	50	9.34

Sample Calculation:

Result = Reading + Cable Loss + Atten. Loss

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

*The test result is rounded off to one or two decimal places, so some differences might be observed.

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Peak Output Power (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date 2010/11/30
 Temperature / Humidity 24deg.C. ,35%
 Engineer Tatsuya Arai
 Mode 11n-20, Tx

[Pre check]
11n-20, Ant3

Data Rate [Mbps]	Freq. [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
6.5 (MCS0)	5180.0	-4.48	2.20	10.00	7.72	5.92	16.99	50	9.27
13.0 (MCS1)	5180.0	-4.52	2.20	10.00	7.68	5.86	16.99	50	9.31
19.5 (MCS2)	5180.0	-4.53	2.20	10.00	7.67	5.85	16.99	50	9.32
26.0 (MCS3)	5180.0	-4.57	2.20	10.00	7.63	5.79	16.99	50	9.36
39.0 (MCS4)	5180.0	-4.51	2.20	10.00	7.69	5.87	16.99	50	9.30
52.0 (MCS5)	5180.0	-4.53	2.20	10.00	7.67	5.85	16.99	50	9.32
58.5 (MCS6)	5180.0	-4.56	2.20	10.00	7.64	5.81	16.99	50	9.35
65.0 (MCS7)	5180.0	-4.50	2.20	10.00	7.70	5.89	16.99	50	9.29
13.0 (MCS8)	5180.0	-4.58	2.20	10.00	7.62	5.78	16.99	50	9.37
26.0 (MCS9)	5180.0	-4.51	2.20	10.00	7.69	5.87	16.99	50	9.30
39.0 (MCS10)	5180.0	-4.59	2.20	10.00	7.61	5.77	16.99	50	9.38
52.0 (MCS11)	5180.0	-4.58	2.20	10.00	7.62	5.78	16.99	50	9.37
78.0 (MCS12)	5180.0	-4.49	2.20	10.00	7.71	5.90	16.99	50	9.28
104.0 (MCS13)	5180.0	-4.54	2.20	10.00	7.66	5.83	16.99	50	9.33
117.0 (MCS14)	5180.0	-4.58	2.20	10.00	7.62	5.78	16.99	50	9.37
130.0 (MCS15)	5180.0	-4.59	2.20	10.00	7.61	5.77	16.99	50	9.38

Sample Calculation:

Result = Reading + Cable Loss + Atten. Loss

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

*The test result is rounded off to one or two decimal places, so some differences might be observed.

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Peak Output Power (Conducted)

11n-20	
Ant1, 5180MHz	Ant2, 5180MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.180 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Span 40 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power -5.64 dBm /25.0000 MHz</p> <p>Power Spectral Density -79.62 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.180 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Span 40 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power -5.68 dBm /25.0000 MHz</p> <p>Power Spectral Density -79.66 dBm/Hz</p>
Ant1, 5200MHz	Ant2, 5200MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.200 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Span 40 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power -6.06 dBm /25.0000 MHz</p> <p>Power Spectral Density -80.04 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.200 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Span 40 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power -5.68 dBm /25.0000 MHz</p> <p>Power Spectral Density -79.66 dBm/Hz</p>
Ant1, 5240MHz	Ant2, 5240MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.240 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Span 40 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power -5.81 dBm /25.0000 MHz</p> <p>Power Spectral Density -79.79 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.240 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Span 40 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power -5.36 dBm /25.0000 MHz</p> <p>Power Spectral Density -79.34 dBm/Hz</p>

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Peak Output Power (Conducted)

11a	
Ant3, 5180MHz	
<p>※ Agilent</p> <p>Ref 0 dBm Atten 10 dB</p> <p>*Samp Log 10 dB/</p> <p>LgAv 100 S1 S2</p> <p>Center 5.180 00 GHz Span 40 MHz *Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power Power Spectral Density -4.48 dBm / 25.0000 MHz -78.46 dBm/Hz</p>	
Ant3, 5200MHz	
<p>※ Agilent</p> <p>Ref 0 dBm Atten 10 dB</p> <p>*Samp Log 10 dB/</p> <p>LgAv 100 S1 S2</p> <p>Center 5.200 00 GHz Span 40 MHz *Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power Power Spectral Density -4.78 dBm / 25.0000 MHz -78.76 dBm/Hz</p>	
Ant3, 5240MHz	
<p>※ Agilent</p> <p>Ref 0 dBm Atten 10 dB</p> <p>*Samp Log 10 dB/</p> <p>LgAv 100 S1 S2</p> <p>Center 5.240 00 GHz Span 40 MHz *Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Channel Power Power Spectral Density -4.64 dBm / 25.0000 MHz -78.62 dBm/Hz</p>	

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Peak Output Power (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date 2010/11/30
 Temperature / Humidity 24deg.C. ,35%
 Engineer Tatsuya Arai
 Mode 11n-40, Tx

Ant1+Ant2+Ant3

Ch	Freq. [MHz]	Ant1 Result [mW]	Ant2 Result [mW]	Ant3 Result [mW]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5190.0	4.38	5.07	6.25	11.96	15.70	16.99	50	5.03
High	5230.0	4.81	5.93	6.08	12.26	16.82	16.99	50	4.73

Ant1

Ch	Freq. [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5190.0	-5.80	2.21	10.00	6.41	4.38	16.99	50	10.58
High	5230.0	-5.45	2.27	10.00	6.82	4.81	16.99	50	10.17

Ant2

Ch	Freq. [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5190.0	-5.16	2.21	10.00	7.05	5.07	16.99	50	9.94
High	5230.0	-4.54	2.27	10.00	7.73	5.93	16.99	50	9.26

Ant3

Ch	Freq. [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	5190.0	-4.25	2.21	10.00	7.96	6.25	16.99	50	9.03
High	5230.0	-4.43	2.27	10.00	7.84	6.08	16.99	50	9.15

Sample Calculation:

Result = Reading + Cable Loss + Atten. Loss

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

*The test result is rounded off to one or two decimal places, so some differences might be observed.

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Peak Output Power (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date 2010/11/30
 Temperature / Humidity 24deg.C. ,35%
 Engineer Tatsuya Arai
 Mode 11n-40, Tx

[Pre check]

11n-40

Data Rate [Mbps]	Freq. [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
13.5 (MCS0)	5190.0	-4.25	2.21	10.00	7.96	6.25	16.99	50	9.03
27.0 (MCS1)	5190.0	-4.32	2.21	10.00	7.89	6.15	16.99	50	9.10
40.5 (MCS2)	5190.0	-4.29	2.21	10.00	7.92	6.19	16.99	50	9.07
54.0 (MCS3)	5190.0	-4.28	2.21	10.00	7.93	6.21	16.99	50	9.06
81.0 (MCS4)	5190.0	-4.31	2.21	10.00	7.90	6.17	16.99	50	9.09
108.0 (MCS5)	5190.0	-4.32	2.21	10.00	7.89	6.15	16.99	50	9.10
121.5 (MCS6)	5190.0	-4.27	2.21	10.00	7.94	6.22	16.99	50	9.05
135.0 (MCS7)	5190.0	-4.29	2.21	10.00	7.92	6.19	16.99	50	9.07
27.0 (MCS8)	5190.0	-4.28	2.21	10.00	7.93	6.21	16.99	50	9.06
54.0 (MCS9)	5190.0	-4.29	2.21	10.00	7.92	6.19	16.99	50	9.07
81.0 (MCS10)	5190.0	-4.34	2.21	10.00	7.87	6.12	16.99	50	9.12
108.0 (MCS11)	5190.0	-4.34	2.21	10.00	7.87	6.12	16.99	50	9.12
162.0 (MCS12)	5190.0	-4.28	2.21	10.00	7.93	6.21	16.99	50	9.06
216.0 (MCS13)	5190.0	-4.38	2.21	10.00	7.83	6.07	16.99	50	9.16
243.0 (MCS14)	5190.0	-4.32	2.21	10.00	7.89	6.15	16.99	50	9.10
270.0 (MCS15)	5190.0	-4.40	2.21	10.00	7.81	6.04	16.99	50	9.18

Sample Calculation:

Result = Reading + Cable Loss + Atten. Loss

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

*The test result is rounded off to one or two decimal places, so some differences might be observed.

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Peak Output Power (Conducted)

11n-40	
Ant1, 5190MHz	Ant1, 5230MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.190 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Sweep 1 ms (601 pts) Span 80 MHz</p> <p>Channel Power -5.80 dBm /45.0000 MHz</p> <p>Power Spectral Density -82.33 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.230 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Sweep 1 ms (601 pts) Span 80 MHz</p> <p>Channel Power -5.45 dBm /45.0000 MHz</p> <p>Power Spectral Density -81.98 dBm/Hz</p>
Ant2, 5190MHz	Ant2, 5230MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.190 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Sweep 1 ms (601 pts) Span 80 MHz</p> <p>Channel Power -5.16 dBm /45.0000 MHz</p> <p>Power Spectral Density -81.69 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.230 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Sweep 1 ms (601 pts) Span 80 MHz</p> <p>Channel Power -4.54 dBm /45.0000 MHz</p> <p>Power Spectral Density -81.07 dBm/Hz</p>
Ant3, 5190MHz	Ant3, 5230MHz
<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.190 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Sweep 1 ms (601 pts) Span 80 MHz</p> <p>Channel Power -4.25 dBm /45.0000 MHz</p> <p>Power Spectral Density -80.78 dBm/Hz</p>	<p>Agilent</p> <p>Ref 0 dBm *Samp Log 10 dB/ LgAv 100 S1 S2 Center 5.230 00 GHz *Res BW 1 MHz Atten 10 dB *VBW 3 MHz Sweep 1 ms (601 pts) Span 80 MHz</p> <p>Channel Power -4.43 dBm /45.0000 MHz</p> <p>Power Spectral Density -80.96 dBm/Hz</p>

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Peak Output Power (Conducted) Reference data for SAR testing

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
Date 2010/11/30
Temperature / Humidity 24deg.C. ,35%
Engineer Tatsuya Arai
Mode 11a, 11n-20, 11n-40

11a

Antenna	Freq. [MHz]	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Ant1	5180.0	0.08	1.37	10.00	11.45	13.98	16.99	50	5.53
Ant2	5180.0	0.09	1.37	10.00	11.46	14.01	16.99	50	5.52
Ant3	5180.0	0.53	1.37	10.00	11.90	15.51	16.99	50	5.08

11n-20

Antenna	Freq. [MHz]	Ant1 Result [mW]	Ant2 Result [mW]	Ant3 Result [mW]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Ant1+Ant2+Ant3	5180.0	8.08	6.91	7.93	13.60	22.93	16.99	50	3.39

11n-20

Ch	Freq. [MHz]	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Ant1	5180.0	-2.30	1.37	10.00	9.07	8.08	16.99	50	7.91
Ant2	5180.0	-2.98	1.37	10.00	8.39	6.91	16.99	50	8.59
Ant3	5180.0	-2.38	1.37	10.00	8.99	7.93	16.99	50	7.99

11n-40

Antenna	Freq. [MHz]	Ant1 Result [mW]	Ant2 Result [mW]	Ant3 Result [mW]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Ant1+Ant2+Ant3	5190.0	7.97	7.37	7.35	13.56	22.69	16.99	50	3.43

11n-40

Ch	Freq. [MHz]	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Ant1	5190.0	-2.36	1.37	10.00	9.01	7.97	16.99	50	7.97
Ant2	5190.0	-2.70	1.37	10.00	8.67	7.37	16.99	50	8.31
Ant3	5190.0	-2.71	1.37	10.00	8.66	7.35	16.99	50	8.32

Sample Calculation:

Result = Reading + Cable Loss + Atten. Loss

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

*The test result is rounded off to one or two decimal places, so some differences might be observed.

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Radiated Emission (below 1GHz and above 1GHz Inside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5180 MHz
11a, 6Mbps, Antenna 3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.948	QP	42.3	11.0	7.3	32.1	28.5	43.5	15.0	320	217	
Hori.	5150.000	PK	43.7	32.1	15.0	39.7	51.1	73.9	22.8	100	48	
Hori.	15540.000	PK	46.3	40.3	0.0	37.1	49.5	73.9	34.0	100	118	
Hori.	20720.000	PK	47.8	40.1	-2.8	46.7	38.4	73.9	35.5	100	355	
Hori.	5150.000	AV	33.5	32.1	15.0	39.7	40.9	53.9	13.0	100	48	
Hori.	15540.000	AV	31.7	40.3	0.0	37.1	34.9	53.9	28.6	100	118	
Hori.	20720.000	AV	34.3	40.1	-2.8	46.7	24.9	53.9	29.0	100	355	
Vert.	109.087	QP	48.3	11.0	7.3	32.1	34.5	43.5	9.0	100	134	
Vert.	215.481	QP	37.9	16.6	8.0	32.0	30.5	43.5	13.0	100	152	
Vert.	631.881	QP	34.5	18.7	9.8	31.9	31.1	46.0	14.9	100	93	
Vert.	698.582	QP	34.2	19.8	10.0	31.8	32.2	46.0	13.8	100	87	
Vert.	798.001	QP	32.8	20.2	10.4	31.6	31.8	46.0	14.2	100	164	
Vert.	5150.000	PK	43.1	32.1	15.0	39.7	50.5	73.9	23.4	115	149	
Vert.	15540.000	PK	45.7	40.3	0.0	37.1	48.9	73.9	34.6	100	60	
Vert.	20720.000	PK	47.8	40.1	-2.8	46.7	38.4	73.9	35.5	100	358	
Vert.	5150.000	AV	33.6	32.1	15.0	39.7	41.0	53.9	12.9	115	149	
Vert.	15540.000	AV	31.7	40.3	0.0	37.1	34.9	53.9	28.6	100	60	
Vert.	20720.000	AV	33.9	40.1	-2.8	46.7	24.5	53.9	29.4	100	358	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Emission (below 1GHz and above 1GHz Inside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5200 MHz
11a, 6Mbps, Antenna 3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.838	QP	41.9	11.0	7.3	32.1	28.1	43.5	15.4	306	213	
Hori.	15600.000	PK	45.3	40.1	0.2	37.1	48.5	73.9	35.0	100	118	
Hori.	20800.000	PK	47.7	40.0	-2.8	46.8	38.1	73.9	35.8	100	91	
Hori.	15600.000	AV	31.7	40.1	0.2	37.1	34.9	53.9	28.6	100	118	
Hori.	20800.000	AV	34.1	40.0	-2.8	46.8	24.5	53.9	29.4	100	91	
Vert.	109.057	QP	47.7	11.0	7.3	32.1	33.9	43.5	9.6	100	149	
Vert.	215.551	QP	38.8	16.6	8.0	32.0	31.4	43.5	12.1	100	158	
Vert.	631.911	QP	34.0	18.7	9.8	31.9	30.6	46.0	15.4	100	86	
Vert.	698.583	QP	29.7	19.8	10.0	31.8	27.7	46.0	18.3	100	76	
Vert.	798.003	QP	33.6	20.2	10.4	31.6	32.6	46.0	13.4	100	182	
Vert.	15600.000	PK	46.1	40.1	0.2	37.1	49.3	73.9	34.2	100	78	
Vert.	20800.000	PK	47.1	40.0	-2.8	46.8	37.5	73.9	36.4	100	359	
Vert.	15600.000	AV	31.8	40.1	0.2	37.1	35.0	53.9	28.5	100	78	
Vert.	20800.000	AV	33.5	40.0	-2.8	46.8	23.9	53.9	30.0	100	359	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Emission (below 1GHz and above 1GHz Inside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5240 MHz
11a, 6Mbps, Antenna 3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.838	QP	41.1	11.0	7.3	32.1	27.3	43.5	16.2	296	225	
Hori.	5350.000	PK	43.5	32.3	15.1	39.3	51.6	73.9	22.3	100	160	
Hori.	15720.000	PK	46.4	39.7	0.2	37.1	49.2	73.9	34.3	100	220	
Hori.	20960.000	PK	47.4	40.0	-2.8	46.9	37.7	73.9	36.2	100	180	
Hori.	5350.000	AV	33.0	32.3	15.1	39.3	41.1	53.9	12.8	100	160	
Hori.	15720.000	AV	32.2	39.7	0.2	37.1	35.0	53.9	28.5	100	220	
Hori.	20960.000	AV	34.3	40.0	-2.8	46.9	24.6	53.9	29.3	100	180	
Vert.	109.057	QP	46.5	11.0	7.3	32.1	32.7	43.5	10.8	100	142	
Vert.	215.552	QP	38.6	16.6	8.0	32.0	31.2	43.5	12.3	100	141	
Vert.	631.911	QP	33.9	18.7	9.8	31.9	30.5	46.0	15.5	100	88	
Vert.	698.584	QP	29.5	19.8	10.0	31.8	27.5	46.0	18.5	100	84	
Vert.	798.003	QP	33.8	20.2	10.4	31.6	32.8	46.0	13.2	100	183	
Vert.	5350.000	PK	42.8	32.3	15.1	39.3	50.9	73.9	23.0	100	139	
Vert.	15720.000	PK	46.9	39.7	0.2	37.1	49.7	73.9	33.8	100	304	
Vert.	20960.000	PK	47.5	40.0	-2.8	46.9	37.8	73.9	36.1	100	359	
Vert.	5350.000	AV	33.0	32.3	15.1	39.3	41.1	53.9	12.8	100	139	
Vert.	15720.000	AV	32.3	39.7	0.2	37.1	35.1	53.9	28.4	100	304	
Vert.	20960.000	AV	34.0	40.0	-2.8	46.9	24.3	53.9	29.6	100	359	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Emission (below 1GHz and above 1GHz Inside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5180 MHz
11n-20, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.830	QP	42.1	11.0	7.3	32.1	28.3	43.5	15.2	317	236	
Hori.	5150.000	PK	43.8	32.1	15.0	39.7	51.2	73.9	22.7	109	279	
Hori.	15540.000	PK	45.6	40.3	0.0	37.1	48.8	73.9	34.7	100	0	
Hori.	20720.000	PK	48.1	40.1	-2.8	46.7	38.7	73.9	35.2	100	0	
Hori.	5150.000	AV	33.5	32.1	15.0	39.7	40.9	53.9	13.0	109	279	
Hori.	15540.000	AV	31.8	40.3	0.0	37.1	35.0	53.9	28.5	100	0	
Hori.	20720.000	AV	34.4	40.1	-2.8	46.7	25.0	53.9	28.9	100	0	
Vert.	109.068	QP	47.2	11.0	7.3	32.1	33.4	43.5	10.1	100	130	
Vert.	215.556	QP	39.9	16.6	8.0	32.0	32.5	43.5	11.0	100	150	
Vert.	631.915	QP	34.0	18.7	9.8	31.9	30.6	46.0	15.4	100	96	
Vert.	698.585	QP	28.5	19.8	10.0	31.8	26.5	46.0	19.5	100	84	
Vert.	798.006	QP	33.4	20.2	10.4	31.6	32.4	46.0	13.6	100	183	
Vert.	5150.000	PK	44.6	32.1	15.0	39.7	52.0	73.9	21.9	102	146	
Vert.	15540.000	PK	45.3	40.3	0.0	37.1	48.5	73.9	35.0	100	358	
Vert.	20720.000	PK	47.7	40.1	-2.8	46.7	38.3	73.9	35.6	100	0	
Vert.	5150.000	AV	33.5	32.1	15.0	39.7	40.9	53.9	13.0	102	146	
Vert.	15540.000	AV	31.9	40.3	0.0	37.1	35.1	53.9	28.4	100	358	
Vert.	20720.000	AV	33.9	40.1	-2.8	46.7	24.5	53.9	29.4	100	0	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Emission (below 1GHz and above 1GHz Inside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5200 MHz
11n-20, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.831	QP	41.9	11.0	7.3	32.1	28.1	43.5	15.4	308	238	
Hori.	15600.000	PK	46.1	40.1	0.2	37.1	49.3	73.9	34.2	100	95	
Hori.	20800.000	PK	47.8	40.0	-2.8	46.8	38.2	73.9	35.7	100	0	
Hori.	15600.000	AV	32.5	40.1	0.2	37.1	35.7	53.9	27.8	100	95	
Hori.	20800.000	AV	35.1	40.0	-2.8	46.8	25.5	53.9	28.4	100	0	
Vert.	109.040	QP	47.0	11.0	7.3	32.1	33.2	43.5	10.3	100	124	
Vert.	215.554	QP	39.2	16.6	8.0	32.0	31.8	43.5	11.7	100	144	
Vert.	631.912	QP	33.6	18.7	9.8	31.9	30.2	46.0	15.8	100	86	
Vert.	698.582	QP	28.6	19.8	10.0	31.8	26.6	46.0	19.4	100	88	
Vert.	798.004	QP	33.3	20.2	10.4	31.6	32.3	46.0	13.7	100	180	
Vert.	15600.000	PK	46.0	40.1	0.2	37.1	49.2	73.9	34.3	100	355	
Vert.	20800.000	PK	47.3	40.0	-2.8	46.8	37.7	73.9	36.2	100	0	
Vert.	15600.000	AV	32.4	40.1	0.2	37.1	35.6	53.9	27.9	100	355	
Vert.	20800.000	AV	33.9	40.0	-2.8	46.8	24.3	53.9	29.6	100	0	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Emission (below 1GHz and above 1GHz Inside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5240 MHz
11n-20, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.835	QP	41.5	11.0	7.3	32.1	27.7	43.5	15.8	308	216	
Hori.	5350.000	PK	42.6	32.3	15.1	39.3	50.7	73.9	23.2	108	287	
Hori.	15720.000	PK	46.4	39.7	0.2	37.1	49.2	73.9	34.3	100	181	
Hori.	20960.000	PK	47.0	40.0	-2.8	46.9	37.3	73.9	36.6	100	0	
Hori.	5350.000	AV	33.0	32.3	15.1	39.3	41.1	53.9	12.8	108	287	
Hori.	15720.000	AV	32.3	39.7	0.2	37.1	35.1	53.9	28.4	100	181	
Hori.	20960.000	AV	33.2	40.0	-2.8	46.9	23.5	53.9	30.4	100	0	
Vert.	109.060	QP	46.4	11.0	7.3	32.1	32.6	43.5	10.9	100	143	
Vert.	215.550	QP	38.8	16.6	8.0	32.0	31.4	43.5	12.1	100	152	
Vert.	631.913	QP	31.9	18.7	9.8	31.9	28.5	46.0	17.5	137	98	
Vert.	698.580	QP	28.2	19.8	10.0	31.8	26.2	46.0	19.8	100	104	
Vert.	798.000	QP	33.5	20.2	10.4	31.6	32.5	46.0	13.5	100	180	
Vert.	5350.000	PK	43.4	32.3	15.1	39.3	51.5	73.9	22.4	101	158	
Vert.	15720.000	PK	46.4	39.7	0.2	37.1	49.2	73.9	34.3	100	0	
Vert.	20960.000	PK	47.7	40.0	-2.8	46.9	38.0	73.9	35.9	100	0	
Vert.	5350.000	AV	33.1	32.3	15.1	39.3	41.2	53.9	12.7	101	158	
Vert.	15720.000	AV	32.3	39.7	0.2	37.1	35.1	53.9	28.4	100	0	
Vert.	20960.000	AV	34.1	40.0	-2.8	46.9	24.4	53.9	29.5	100	0	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Emission (below 1GHz and above 1GHz Inside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5190 MHz
11n-40, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.832	QP	42.6	11.0	7.3	32.1	28.8	43.5	14.7	308	233	
Hori.	5150.000	PK	46.8	32.1	15.0	39.7	54.2	73.9	19.7	100	0	
Hori.	15570.000	PK	46.0	40.2	0.0	37.1	49.1	73.9	34.4	100	0	
Hori.	20760.000	PK	47.3	40.1	-2.8	46.7	37.9	73.9	36.0	100	0	
Hori.	5150.000	AV	33.6	32.1	15.0	39.7	41.0	53.9	12.9	100	0	
Hori.	15570.000	AV	32.1	40.2	0.0	37.1	35.2	53.9	28.3	100	0	
Hori.	20760.000	AV	33.3	40.1	-2.8	46.7	23.9	53.9	30.0	100	0	
Vert.	109.048	QP	47.4	11.0	7.3	32.1	33.6	43.5	9.9	100	143	
Vert.	215.557	QP	39.3	16.6	8.0	32.0	31.9	43.5	11.6	100	148	
Vert.	631.910	QP	33.8	18.7	9.8	31.9	30.4	46.0	15.6	100	86	
Vert.	698.582	QP	28.8	19.8	10.0	31.8	26.8	46.0	19.2	100	86	
Vert.	798.006	QP	33.7	20.2	10.4	31.6	32.7	46.0	13.3	100	174	
Vert.	5150.000	PK	46.6	32.1	15.0	39.7	54.0	73.9	19.9	100	0	
Vert.	15570.000	PK	46.0	40.2	0.0	37.1	49.1	73.9	34.4	100	350	
Vert.	20760.000	PK	48.2	40.1	-2.8	46.7	38.8	73.9	35.1	100	216	
Vert.	5150.000	AV	32.9	32.1	15.0	39.7	40.3	53.9	13.6	100	0	
Vert.	15570.000	AV	32.1	40.2	0.0	37.1	35.2	53.9	28.3	100	350	
Vert.	20760.000	AV	33.5	40.1	-2.8	46.7	24.1	53.9	29.8	100	216	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Emission (below 1GHz and above 1GHz Inside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5230 MHz
11n-40, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.836	QP	42.5	11.0	7.3	32.1	28.7	43.5	14.8	311	224	
Hori.	5350.000	PK	46.0	32.3	15.1	39.3	54.1	73.9	19.8	100	21	
Hori.	15690.000	PK	45.9	39.8	0.2	37.1	48.8	73.9	34.7	100	353	
Hori.	20920.000	PK	48.0	40.0	-2.8	46.9	38.3	73.9	35.6	100	0	
Hori.	5350.000	AV	32.9	32.3	15.1	39.3	41.0	53.9	12.9	100	21	
Hori.	15690.000	AV	32.2	39.8	0.2	37.1	35.1	53.9	28.4	100	353	
Hori.	20920.000	AV	34.0	40.0	-2.8	46.9	24.3	53.9	29.6	100	0	
Vert.	109.055	QP	47.9	11.0	7.3	32.1	34.1	43.5	9.4	100	139	
Vert.	215.553	QP	39.6	16.6	8.0	32.0	32.2	43.5	11.3	100	145	
Vert.	631.915	QP	33.9	18.7	9.8	31.9	30.5	46.0	15.5	100	92	
Vert.	698.585	QP	28.3	19.8	10.0	31.8	26.3	46.0	19.7	100	85	
Vert.	798.000	QP	33.8	20.2	10.4	31.6	32.8	46.0	13.2	100	177	
Vert.	5350.000	PK	46.1	32.3	15.1	39.3	54.2	73.9	19.7	100	290	
Vert.	15690.000	PK	45.8	39.8	0.2	37.1	48.7	73.9	34.8	100	359	
Vert.	20920.000	PK	48.0	40.0	-2.8	46.9	38.3	73.9	35.6	100	241	
Vert.	5350.000	AV	32.9	32.3	15.1	39.3	41.0	53.9	12.9	100	290	
Vert.	15690.000	AV	32.2	39.8	0.2	37.1	35.1	53.9	28.4	100	359	
Vert.	20920.000	AV	34.2	40.0	-2.8	46.9	24.5	53.9	29.4	100	241	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Data of Spurious Emissions (Calculation)(above 1GHz Outside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5180 MHz
11a, 6Mbps, Antenna 3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	43.7	32.1	15.0	39.7	51.1	-44.13	-27.00	17.1	100	48	
Hori.	10360.000	PK	42.7	39.5	7.7	37.4	52.5	-42.73	-27.00	15.7	100	0	
Hori.	25900.000	PK	48.0	40.3	-1.8	47.3	39.2	-56.03	-27.00	29.0	100	0	
Vert.	5150.000	PK	43.1	32.1	15.0	39.7	50.5	-44.73	-27.00	17.7	115	149	
Vert.	10360.000	PK	42.8	39.5	7.7	37.4	52.6	-42.63	-27.00	15.6	100	0	
Vert.	25900.000	PK	47.9	40.3	-1.8	47.3	39.1	-56.13	-27.00	29.1	100	354	

Result[dBuV/m] = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

Result(EIRP[dBm])=10*LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2) / 30) *10^3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Data of Spurious Emissions (Calculation)(above 1GHz Outside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5200 MHz
11a, 6Mbps, Antenna 3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10400.000	PK	42.8	39.6	7.7	37.4	52.7	-42.53	-27.00	15.5	100	0	
Hori.	26000.000	PK	49.7	40.3	-1.8	47.3	40.9	-54.33	-27.00	27.3	100	6	
Vert.	10400.000	PK	42.8	39.6	7.7	37.4	52.7	-42.53	-27.00	15.5	100	0	
Vert.	26000.000	PK	47.3	40.3	-1.8	47.3	38.5	-56.73	-27.00	29.7	100	0	

Result[dBuV/m] = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)
Result(EIRP[dBm])=10*LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2) / 30) *10^3
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Data of Spurious Emissions (Calculation)(above 1GHz Outside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5240 MHz
11a, 6Mbps, Antenna 3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	43.5	32.3	15.1	39.3	51.6	-43.63	-27.00	16.6	100	160	
Hori.	10480.000	PK	44.8	39.8	7.7	37.3	55.0	-40.23	-27.00	13.2	100	0	
Hori.	26200.000	PK	48.5	40.2	-1.8	47.2	39.7	-55.53	-27.00	28.5	100	4	
Vert.	5350.000	PK	42.8	32.3	15.1	39.3	50.9	-44.33	-27.00	17.3	100	139	
Vert.	10480.000	PK	44.1	39.8	7.7	37.3	54.3	-40.93	-27.00	13.9	100	0	
Vert.	26200.000	PK	47.4	40.2	-1.8	47.2	38.6	-56.63	-27.00	29.6	100	0	

Result[dBuV/m] = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)
Result(EIRP[dBm])=10*LOG(((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Data of Spurious Emissions (Calculation)(above 1GHz Outside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5180 MHz
11n-20, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	43.8	32.1	15.0	39.7	51.2	-44.03	-27.00	17.0	109	279	
Hori.	10360.000	PK	43.9	39.5	7.7	37.4	53.7	-41.53	-27.00	14.5	100	0	
Hori.	25900.000	PK	49.8	40.3	-1.8	47.3	41.0	-54.23	-27.00	27.2	100	9	
Vert.	5150.000	PK	44.6	32.1	15.0	39.7	52.0	-43.23	-27.00	16.2	102	146	
Vert.	10360.000	PK	43.7	39.5	7.7	37.4	53.5	-41.73	-27.00	14.7	100	0	
Vert.	25900.000	PK	47.2	40.3	-1.8	47.3	38.4	-56.83	-27.00	29.8	100	350	

Result[dBuV/m] = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

Result(EIRP[dBm])=10*LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2) / 30) *10^3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Data of Spurious Emissions (Calculation)(above 1GHz Outside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5200 MHz
11n-20, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10400.000	PK	45.0	39.6	7.7	37.4	54.9	-40.33	-27.00	13.3	100	0	
Hori.	26000.000	PK	48.9	40.3	-1.8	47.3	40.1	-55.13	-27.00	28.1	100	10	
Vert.	10400.000	PK	45.2	39.6	7.7	37.4	55.1	-40.13	-27.00	13.1	100	0	
Vert.	26000.000	PK	46.9	40.3	-1.8	47.3	38.1	-57.13	-27.00	30.1	100	359	

Result[dBuV/m] = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)
Result(EIRP[dBm])=10*LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Data of Spurious Emissions (Calculation)(above 1GHz Outside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5240 MHz
11n-20, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	42.6	32.3	15.1	39.3	50.7	-44.53	-27.00	17.5	108	287	
Hori.	10480.000	PK	45.1	39.8	7.7	37.3	55.3	-39.93	-27.00	12.9	101	158	
Hori.	26200.000	PK	48.3	40.2	-1.8	47.2	39.5	-55.73	-27.00	28.7	100	10	
Vert.	5350.000	PK	43.4	32.3	15.1	39.3	51.5	-43.73	-27.00	16.7	101	158	
Vert.	10480.000	PK	45.1	39.8	7.7	37.3	55.3	-39.93	-27.00	12.9	100	0	
Vert.	26200.000	PK	47.4	40.2	-1.8	47.2	38.6	-56.63	-27.00	29.6	100	359	

Result[dBuV/m] = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

Result(EIRP[dBm])=10*LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 / 30) *10^3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Data of Spurious Emissions (Calculation)(above 1GHz Outside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5190 MHz
11n-40, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	46.8	32.1	15.0	39.7	54.2	-41.03	-27.00	14.0	100	0	
Hori.	10380.000	PK	44.5	39.6	7.7	37.4	54.4	-40.83	-27.00	13.8	100	0	
Hori.	25950.000	PK	49.2	40.3	-1.8	47.3	40.4	-54.83	-27.00	27.8	100	11	
Hori.	5150.000	AV	33.6	32.1	15.0	39.7	41.0	-54.23	-27.00	27.2	100	0	
Hori.	10380.000	AV	32.0	39.6	7.7	37.4	41.9	-53.33	-27.00	26.3	100	0	
Hori.	25950.000	AV	36.2	40.3	-1.8	47.3	27.4	-67.83	-27.00	40.8	100	11	
Vert.	5150.000	PK	46.6	32.1	15.0	39.7	54.0	-41.23	-27.00	14.2	100	0	
Vert.	10380.000	PK	45.9	39.6	7.7	37.4	55.8	-39.43	-27.00	12.4	100	0	
Vert.	25950.000	PK	47.5	40.3	-1.8	47.3	38.7	-56.53	-27.00	29.5	100	0	
Vert.	5150.000	AV	32.9	32.1	15.0	39.7	40.3	-54.93	-27.00	27.9	100	0	
Vert.	10380.000	AV	33.7	39.6	7.7	37.4	43.6	-51.63	-27.00	24.6	100	0	
Vert.	25950.000	AV	34.0	40.3	-1.8	47.3	25.2	-70.03	-27.00	43.0	100	0	

Result[dBuV/m] = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

Result(EIRP[dBm])=10*LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2) / 30) *10^3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB

Data of Spurious Emissions (Calculation)(above 1GHz Outside of the restricted band)

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi Anechoic Chamber
Date 2010/12/1 2010/12/2
Temperature / Humidity 26deg.C ,32% 22deg.C ,43%
Engineer Tatsuya Arai, Hikaru Shirasawa Takahiro Suzuki, Hikaru Shirasawa
Mode Tx, 5230 MHz
11n-40, MCS0, Antenna 1+2+3,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	46.0	32.3	15.1	39.3	54.1	-41.13	-27.00	14.1	100	21	
Hori.	10460.000	PK	45.9	39.8	7.8	37.3	56.2	-39.03	-27.00	12.0	100	344	
Hori.	26150.000	PK	48.4	40.3	-1.8	47.2	39.7	-55.53	-27.00	28.5	100	11	
Vert.	5350.000	PK	46.1	32.3	15.1	39.3	54.2	-41.03	-27.00	14.0	100	290	
Vert.	10460.000	PK	44.9	39.8	7.8	37.3	55.2	-40.03	-27.00	13.0	100	0	
Vert.	26150.000	PK	46.8	40.3	-1.8	47.2	38.1	-57.13	-27.00	30.1	100	0	

Result[dBuV/m] = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

Result(EIRP[dBm])=10*LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2) / 30) *10^3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor: 13GHz-40GHz 20log(3.0m/1.0m)= 9.5dB