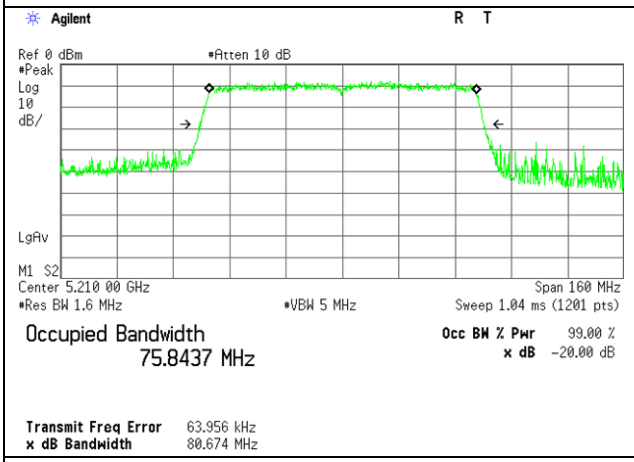
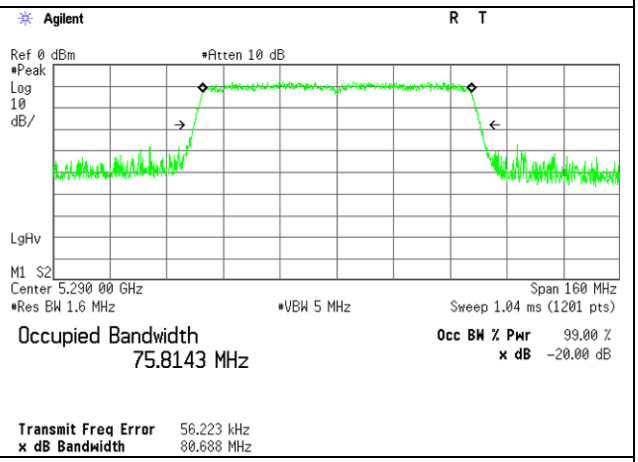
99% Occupied Bandwidth

11ac-80

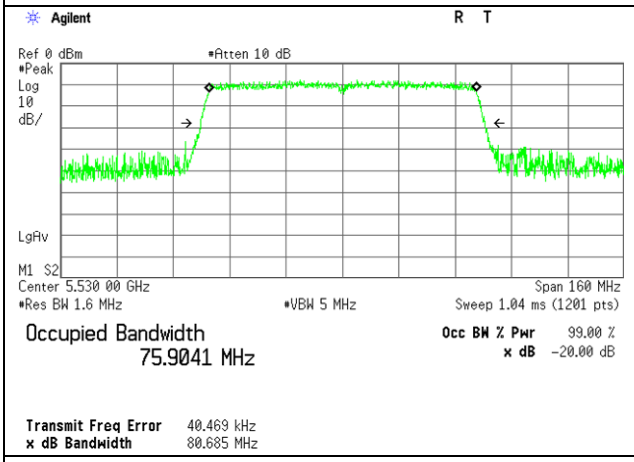
5210MHz



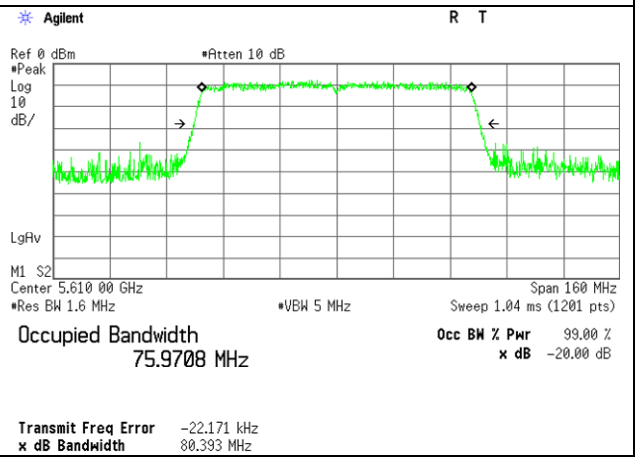
5290MHz



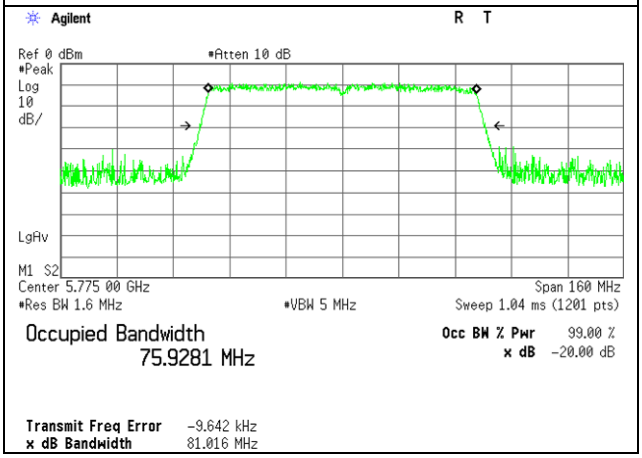
5530MHz



5610MHz



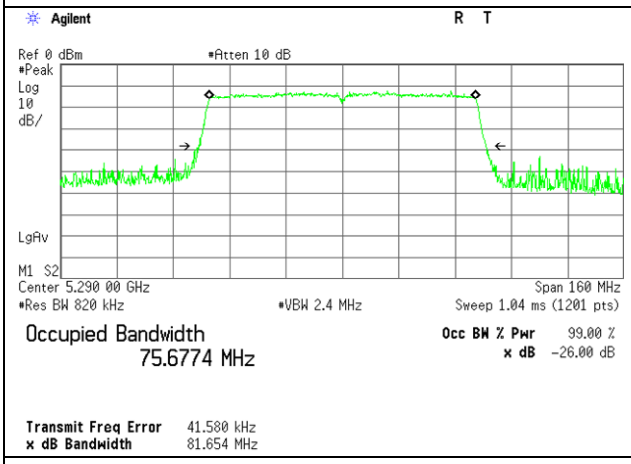
5775MHz



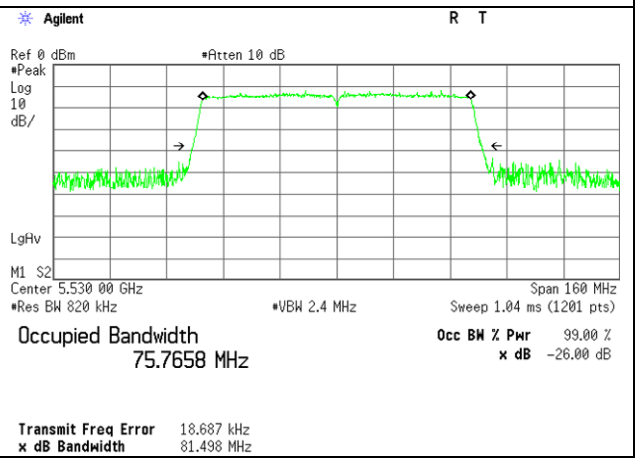
26dB Emission Bandwidth

11ac-80

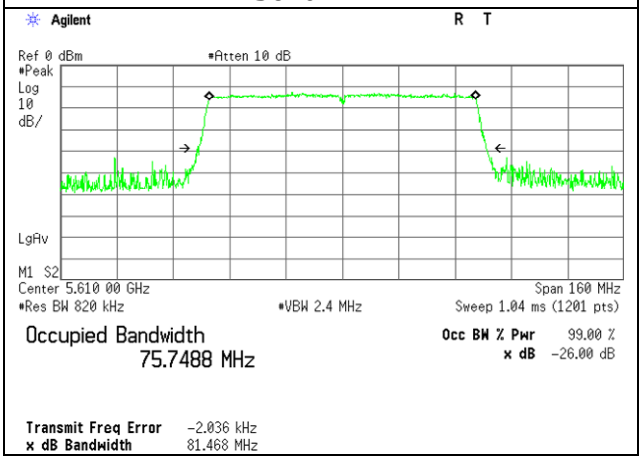
5290MHz



5530MHz



5610MHz



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Facsimile : +81 596 24 8124

6dB Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	25deg. C / 31% RH
Engineer	Shinichi Miyazono
Mode	Tx

11a

Frequency [MHz]	20dB Bandwidth [MHz]	Limit [kHz]
5745	16.411	> 500
5785	16.393	> 500
5825	16.368	> 500

11n-20

Frequency [MHz]	20dB Bandwidth [MHz]	Limit [kHz]
5745	17.598	> 500
5785	17.598	> 500
5825	17.635	> 500

11ac-20

Frequency [MHz]	20dB Bandwidth [MHz]	Limit [kHz]
5745	17.754	> 500
5785	17.715	> 500
5825	17.741	> 500

11n-40

Frequency [MHz]	20dB Bandwidth [MHz]	Limit [kHz]
5755	36.442	> 500
5795	36.469	> 500

11ac-40

Frequency [MHz]	20dB Bandwidth [MHz]	Limit [kHz]
5755	36.546	> 500
5795	36.498	> 500

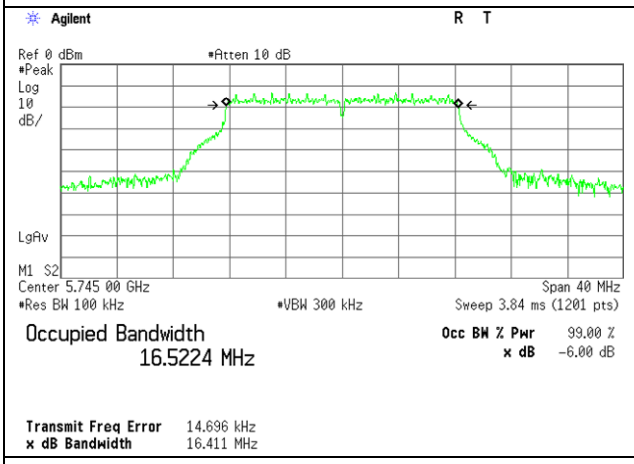
11ac-80

Frequency [MHz]	20dB Bandwidth [MHz]	Limit [kHz]
5775	75.570	> 500

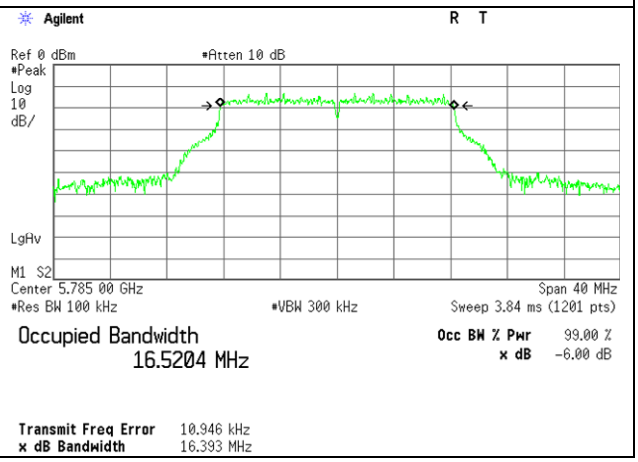
6dB Bandwidth

11a

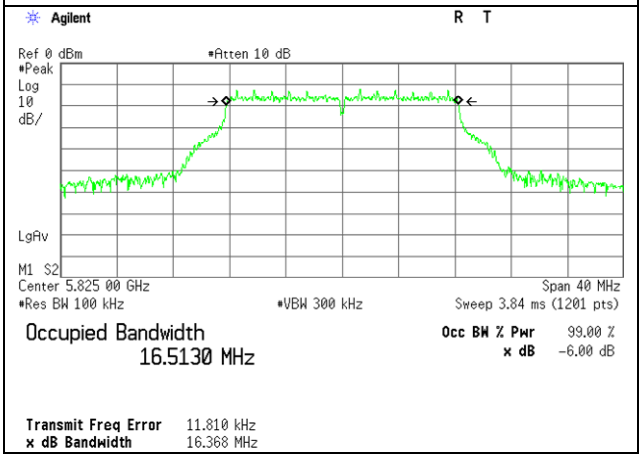
5745MHz



5785MHz



5825MHz



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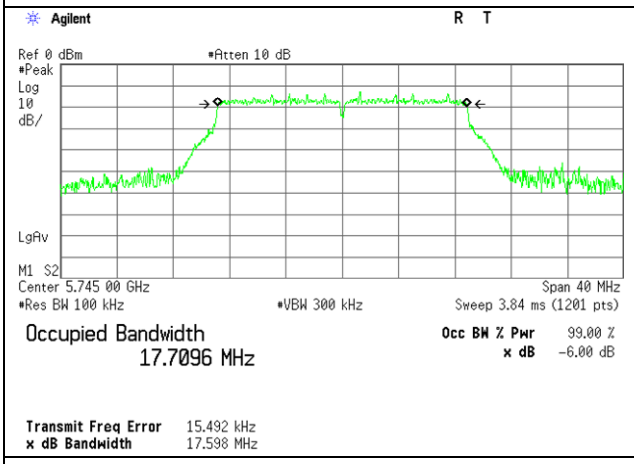
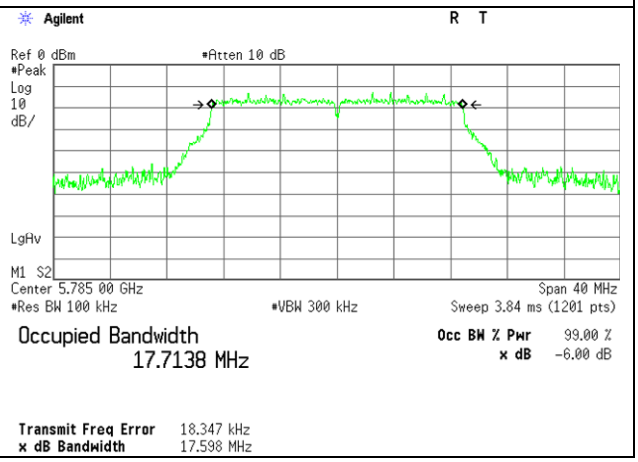
6dB Bandwidth

11n-20

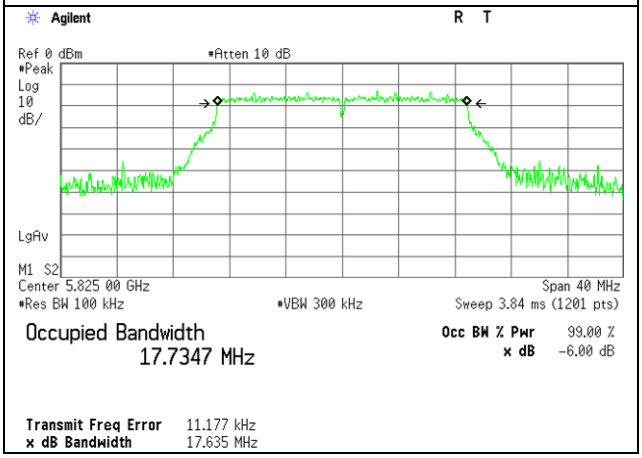
5745MHz



5785MHz



5825MHz



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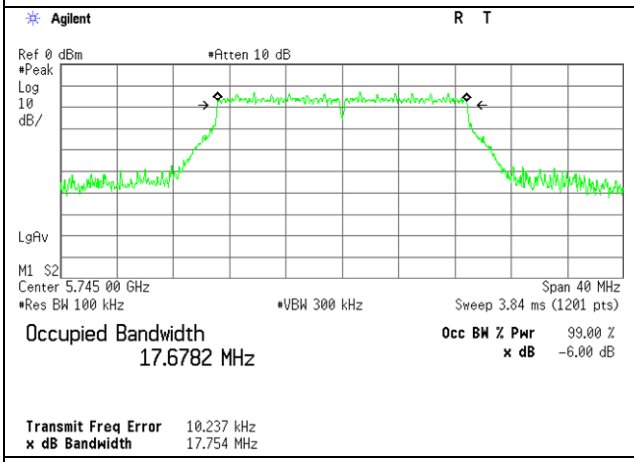
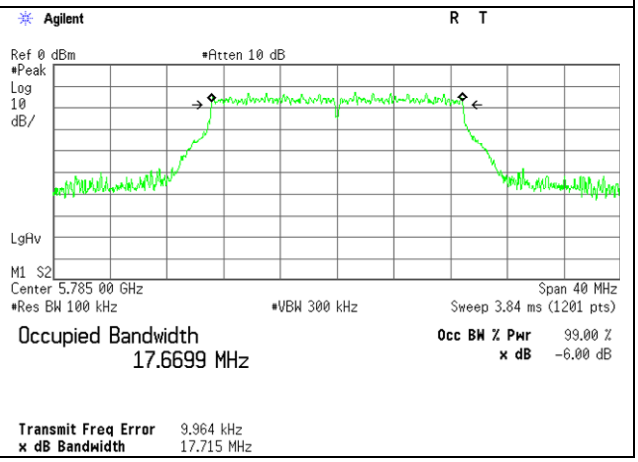
6dB Bandwidth

11ac-20

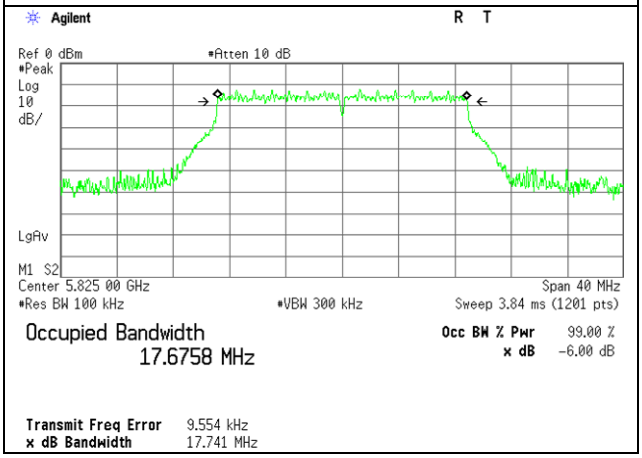
5745MHz



5785MHz



5825MHz



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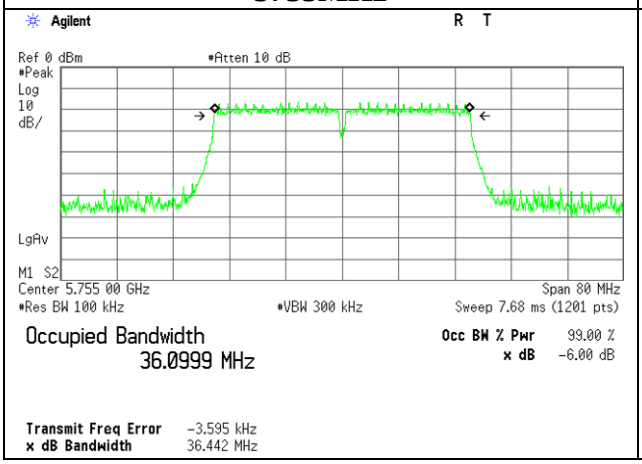
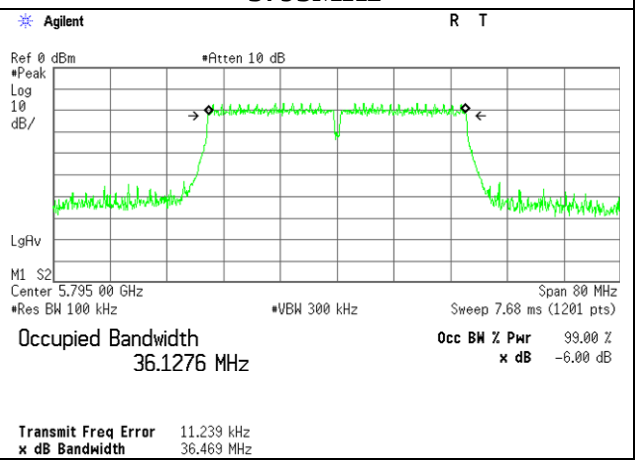
6dB Bandwidth

11n-40

5755MHz

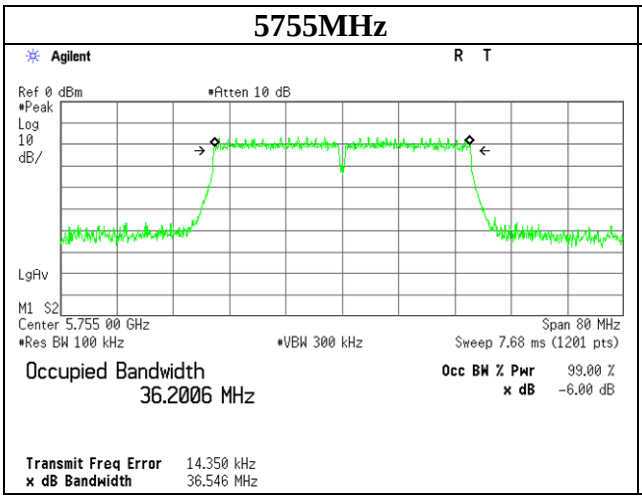


5795MHz

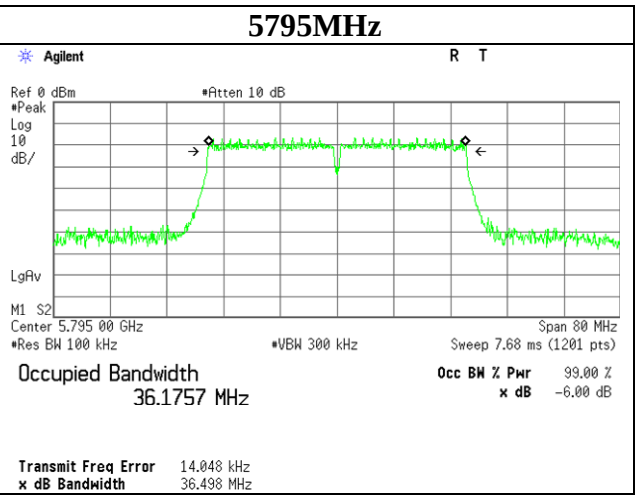


11ac-40

5755MHz

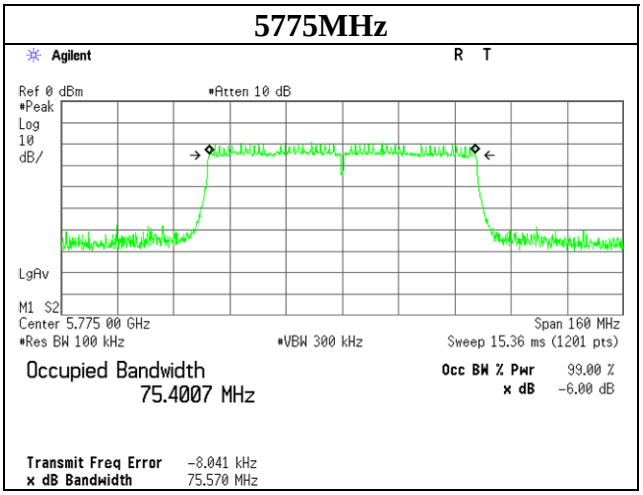


5795MHz



11ac-80

5775MHz



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Maximum Conducted Output Power

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/24/2015
Temperature/ Humidity	23deg. C / 40% RH
Engineer	Kazuya Yoshioka
Mode	11a/n-20/ac-20 Tx

11a

Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result (Cond.) [dBm]	Result (e.i.r.p.) [dBm]	Limit (Cond.) [dBm]	Limit (e.i.r.p.) [dBm]	Margin (Cond.) [dB]	Margin (e.i.r.p.) [dB]
5180.0	-0.20	1.80	10.03	0.70	11.63	12.33	23.97	29.97	12.34	17.64
5220.0	-0.62	1.80	10.03	0.70	11.21	11.91	23.97	29.97	12.76	18.06
5240.0	-0.57	1.80	10.03	0.70	11.26	11.96	23.97	29.97	12.71	18.01
5260.0	0.06	1.80	10.03	0.70	11.89	12.59	23.97	29.97	12.08	17.38
5300.0	-0.06	1.80	10.03	0.70	11.77	12.47	23.97	29.97	12.20	17.50
5320.0	-0.04	1.80	10.03	0.70	11.79	12.49	23.97	29.97	12.18	17.48
5500.0	0.19	1.40	10.03	0.70	11.62	12.32	23.97	29.97	12.35	17.65
5580.0	-0.08	1.40	10.03	0.70	11.35	12.05	23.97	29.97	12.62	17.92
5700.0	-0.47	1.40	10.04	0.70	10.97	11.67	23.97	29.97	13.00	18.30
5745.0	-0.52	1.40	10.04	0.70	10.92	11.62	30.00	36.00	19.08	24.38
5785.0	-0.58	1.40	10.04	0.70	10.86	11.56	30.00	36.00	19.14	24.44
5825.0	-0.45	1.40	10.04	0.70	10.99	11.69	30.00	36.00	19.01	24.31

11n-20

Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result (Cond.) [dBm]	Result (e.i.r.p.) [dBm]	Limit (Cond.) [dBm]	Limit (e.i.r.p.) [dBm]	Margin (Cond.) [dB]	Margin (e.i.r.p.) [dB]
5180.0	-0.20	1.80	10.03	0.70	11.63	12.33	23.97	29.97	12.34	17.64
5220.0	-0.57	1.80	10.03	0.70	11.26	11.96	23.97	29.97	12.71	18.01
5240.0	-0.63	1.80	10.03	0.70	11.20	11.90	23.97	29.97	12.77	18.07
5260.0	0.26	1.80	10.03	0.70	12.09	12.79	23.97	29.97	11.88	17.18
5300.0	-0.09	1.80	10.03	0.70	11.74	12.44	23.97	29.97	12.23	17.53
5320.0	-0.11	1.80	10.03	0.70	11.72	12.42	23.97	29.97	12.25	17.55
5500.0	0.16	1.40	10.03	0.70	11.59	12.29	23.97	29.97	12.38	17.68
5580.0	0.10	1.40	10.03	0.70	11.53	12.23	23.97	29.97	12.44	17.74
5700.0	-0.39	1.40	10.04	0.70	11.05	11.75	23.97	29.97	12.92	18.22
5745.0	-0.43	1.40	10.04	0.70	11.01	11.71	30.00	36.00	18.99	24.29
5785.0	-0.47	1.40	10.04	0.70	10.97	11.67	30.00	36.00	19.03	24.33
5825.0	-0.24	1.40	10.04	0.70	11.20	11.90	30.00	36.00	18.80	24.10

11ac-20

Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result (Cond.) [dBm]	Result (e.i.r.p.) [dBm]	Limit (Cond.) [dBm]	Limit (e.i.r.p.) [dBm]	Margin (Cond.) [dB]	Margin (e.i.r.p.) [dB]
5180.0	-0.11	1.80	10.03	0.70	11.72	12.42	23.97	29.97	12.25	17.55
5220.0	-0.57	1.80	10.03	0.70	11.26	11.96	23.97	29.97	12.71	18.01
5240.0	-0.74	1.80	10.03	0.70	11.09	11.79	23.97	29.97	12.88	18.18
5260.0	0.15	1.80	10.03	0.70	11.98	12.68	23.97	29.97	11.99	17.29
5300.0	0.03	1.80	10.03	0.70	11.86	12.56	23.97	29.97	12.11	17.41
5320.0	-0.24	1.80	10.03	0.70	11.59	12.29	23.97	29.97	12.38	17.68
5500.0	0.06	1.40	10.03	0.70	11.49	12.19	23.97	29.97	12.48	17.78
5580.0	-0.26	1.40	10.03	0.70	11.17	11.87	23.97	29.97	12.80	18.10
5700.0	-0.44	1.40	10.04	0.70	11.00	11.70	23.97	29.97	12.97	18.27
5745.0	-0.54	1.40	10.04	0.70	10.90	11.60	30.00	36.00	19.10	24.40
5785.0	-0.57	1.40	10.04	0.70	10.87	11.57	30.00	36.00	19.13	24.43
5825.0	-0.38	1.40	10.04	0.70	11.06	11.76	30.00	36.00	18.94	24.24

Result(Cond.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss + Antenna
15.407(a)(1)(iv) Limit(Cond.) = 23.97dBm(250mW)
Although the EUT operates on Master mode, more strigent limit for Client device was applied.
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm
15.407(a)(3) Limit(Cond.) = 30dBm(1W)

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/24/2015
Temperature/ Humidity	23deg. C / 40% RH
Engineer	Kazuya Yoshioka
Mode	11n-40/ac-40/ac-80 Tx

11n-40

Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result (Cond.) [dBm]	Result (e.i.r.p.) [dBm]	Limit (Cond.) [dBm]	Limit (e.i.r.p.) [dBm]	Margin (Cond.) [dB]	Margin (e.i.r.p.) [dB]
5190.0	-0.74	1.80	10.03	0.70	11.09	11.79	23.97	29.97	12.88	18.18
5230.0	-0.76	1.80	10.03	0.70	11.07	11.77	23.97	29.97	12.90	18.20
5270.0	-1.14	1.80	10.03	0.70	10.69	11.39	23.97	29.97	13.28	18.58
5310.0	-1.24	1.80	10.03	0.70	10.59	11.29	23.97	29.97	13.38	18.68
5510.0	-0.73	1.40	10.03	0.70	10.70	11.40	23.97	29.97	13.27	18.57
5550.0	-0.71	1.40	10.03	0.70	10.72	11.42	23.97	29.97	13.25	18.55
5670.0	-1.28	1.40	10.04	0.70	10.16	10.86	23.97	29.97	13.81	19.11
5755.0	-2.06	1.40	10.04	0.70	9.38	10.08	30.00	36.00	20.62	25.92
5795.0	-1.84	1.40	10.04	0.70	9.60	10.30	30.00	36.00	20.40	25.70

11ac-40

Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result (Cond.) [dBm]	Result (e.i.r.p.) [dBm]	Limit (Cond.) [dBm]	Limit (e.i.r.p.) [dBm]	Margin (Cond.) [dB]	Margin (e.i.r.p.) [dB]
5190.0	-0.73	1.80	10.03	0.70	11.10	11.80	23.97	29.97	12.87	18.17
5230.0	-0.87	1.80	10.03	0.70	10.96	11.66	23.97	29.97	13.01	18.31
5270.0	-1.16	1.80	10.03	0.70	10.67	11.37	23.97	29.97	13.30	18.60
5310.0	-1.19	1.80	10.03	0.70	10.64	11.34	23.97	29.97	13.33	18.63
5510.0	-0.64	1.40	10.03	0.70	10.79	11.49	23.97	29.97	13.18	18.48
5550.0	-0.78	1.40	10.03	0.70	10.65	11.35	23.97	29.97	13.32	18.62
5670.0	-1.17	1.40	10.04	0.70	10.27	10.97	23.97	29.97	13.70	19.00
5755.0	-1.99	1.40	10.04	0.70	9.45	10.15	30.00	36.00	20.55	25.85
5795.0	-1.77	1.40	10.04	0.70	9.67	10.37	30.00	36.00	20.33	25.63

11ac-80

Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result (Cond.) [dBm]	Result (e.i.r.p.) [dBm]	Limit (Cond.) [dBm]	Limit (e.i.r.p.) [dBm]	Margin (Cond.) [dB]	Margin (e.i.r.p.) [dB]
5210.0	-1.06	1.80	10.03	0.70	10.77	11.47	23.97	29.97	13.20	18.50
5290.0	-1.03	1.80	10.03	0.70	10.80	11.50	23.97	29.97	13.17	18.47
5530.0	-0.82	1.40	10.03	0.70	10.61	11.31	23.97	29.97	13.36	18.66
5610.0	-1.21	1.40	10.03	0.70	10.22	10.92	23.97	29.97	13.75	19.05
5775.0	-1.97	1.40	10.04	0.70	9.47	10.17	30.00	36.00	20.53	25.83

Result(Cond.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss + Antenna
15.407(a)(1)(iv) Limit(Cond.) = 23.97dBm(250mW)
Although the EUT operates on Master mode, more strigent limit for Client device was applied.
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm
15.407(a)(3) Limit(Cond.) = 30dBm(1W)

Maximum Conducted Output Power
(Reference data)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10662332H
Date	01/06/2015
Temperature/ Humidity	24deg. C / 42% RH
Engineer	Takumi Shimada
Mode	11a/n-20/ac-20 Tx

11a, 5180MHz

Data Rate [Mbps]	Reading [dBm]	Remark
6	1.78	
9	1.90	*
12	1.88	
18	1.87	
24	1.88	
36	1.78	
48	1.83	
54	1.88	

* Worst Rate
All comparisons were carried out on same frequency and measurement factors.

11n-20, 5180MHz

MCS Number	Reading [dBm]	Remark
0	0.95	*
1	0.89	
2	0.90	
3	0.94	
4	0.90	
5	0.91	
6	0.87	
7	0.92	

* Worst Rate
All comparisons were carried out on same frequency and measurement factors.

11ac-20, 5180MHz

MCS Number	Reading [dBm]	Remark
0	-0.21	
1	-0.24	
2	-0.16	
3	-0.19	
4	-0.27	
5	-0.14	*
6	-0.22	
7	-0.20	
8	-0.18	

* Worst Rate
All comparisons were carried out on same frequency and measurement factors.

Maximum Conducted Output Power
(Reference data)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10662332H
Date	01/06/2015
Temperature/ Humidity	24deg. C / 42% RH
Engineer	Takumi Shimada
Mode	11n-40/ac-40/ac-80 Tx

11n-40, 5190MHz

MCS Number	Reading [dBm]	Remark
0	1.54	
1	1.68	
2	1.61	
3	1.67	
4	1.51	
5	1.63	
6	1.67	
7	1.69	*

* Worst Rate
All comparisons were carried out on same frequency and measurement factors.

11ac-40, 5190MHz

MCS Number	Reading [dBm]	Remark
0	0.53	
1	0.52	
2	0.61	
3	0.65	
4	0.50	
5	0.69	*
6	0.48	
7	0.57	
8	0.51	
9	0.50	

* Worst Rate
All comparisons were carried out on same frequency and measurement factors.

11ac-80, 5210MHz

MCS Number	Reading [dBm]	Remark
0	0.12	*
1	-0.02	
2	0.10	
3	-0.09	
4	-0.07	
5	0.03	
6	-0.04	
7	-0.11	
8	0.03	
9	-0.02	

* Worst Rate
All comparisons were carried out on same frequency and measurement factors.

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10662332H
Date	24 deg. C / 35% RH
Temperature/ Humidity	Takumi Shimada
Engineer	01/26/2015
Mode	11a/n-20/ac-20 Tx

11a

Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor [dB]	Correction factor [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
5180.0	-12.84	3.75	10.12	0.07	0.00	1.10	11.00	9.90
5220.0	-13.42	3.76	10.12	0.07	0.00	0.53	11.00	10.47
5240.0	-13.37	3.77	10.12	0.07	0.00	0.59	11.00	10.41
5260.0	-12.68	3.77	10.12	0.07	0.00	1.28	11.00	9.72
5300.0	-12.96	3.78	10.11	0.07	0.00	1.00	11.00	10.00
5320.0	-12.95	3.79	10.11	0.07	0.00	1.02	11.00	9.98
5500.0	-12.58	3.43	10.11	0.07	0.00	1.03	11.00	9.97
5580.0	-13.08	3.44	10.11	0.07	0.00	0.54	11.00	10.46
5700.0	-13.29	3.46	10.10	0.07	0.00	0.34	11.00	10.66
5745.0	-16.44	3.47	10.09	0.07	0.27	-2.54	30.00	32.54
5785.0	-16.42	3.47	10.09	0.07	0.27	-2.53	30.00	32.53
5825.0	-16.17	3.48	10.09	0.07	0.27	-2.26	30.00	32.26

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator + Duty factor + Correct

11n-20

Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor [dB]	Correction factor [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
5180.0	-13.22	3.75	10.12	0.05	0.00	0.70	11.00	10.30
5220.0	-13.43	3.76	10.12	0.05	0.00	0.50	11.00	10.50
5240.0	-13.80	3.77	10.12	0.05	0.00	0.14	11.00	10.86
5260.0	-12.92	3.77	10.12	0.05	0.00	1.02	11.00	9.98
5300.0	-12.91	3.78	10.11	0.05	0.00	1.03	11.00	9.97
5320.0	-13.20	3.79	10.11	0.05	0.00	0.75	11.00	10.25
5500.0	-13.09	3.43	10.11	0.05	0.00	0.50	11.00	10.50
5580.0	-13.44	3.44	10.11	0.05	0.00	0.16	11.00	10.84
5700.0	-13.62	3.46	10.10	0.05	0.00	-0.01	11.00	11.01
5745.0	-16.81	3.47	10.09	0.05	0.27	-2.93	30.00	32.93
5785.0	-16.65	3.47	10.09	0.05	0.27	-2.77	30.00	32.77
5825.0	-16.50	3.48	10.09	0.05	0.27	-2.61	30.00	32.61

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator + Duty factor + Correct

11ac-20

Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor [dB]	Correction factor [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
5180.0	-13.36	3.75	10.12	0.36	0.00	0.87	11.00	10.13
5220.0	-13.82	3.76	10.12	0.36	0.00	0.42	11.00	10.58
5240.0	-14.05	3.77	10.12	0.36	0.00	0.20	11.00	10.80
5260.0	-13.13	3.77	10.12	0.36	0.00	1.13	11.00	9.88
5300.0	-13.21	3.78	10.11	0.36	0.00	1.04	11.00	9.96
5320.0	-13.42	3.79	10.11	0.36	0.00	0.84	11.00	10.16
5500.0	-13.34	3.43	10.11	0.36	0.00	0.56	11.00	10.44
5580.0	-13.44	3.44	10.11	0.36	0.00	0.47	11.00	10.53
5700.0	-13.65	3.46	10.10	0.36	0.00	0.27	11.00	10.73
5745.0	-16.80	3.47	10.09	0.36	0.27	-2.61	30.00	32.61
5785.0	-16.29	3.47	10.09	0.36	0.27	-2.10	30.00	32.10
5825.0	-16.62	3.48	10.09	0.36	0.27	-2.42	30.00	32.42

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator + Duty factor + Correct

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10662332H
Date	24 deg. C / 35% RH
Temperature/ Humidity	Takumi Shimada
Engineer	01/26/2015
Mode	11n-40/ac-40/ac-80 Tx

11n-40

Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor [dB]	Correction factor [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
5190.0	-16.98	3.76	10.12	0.69	0.00	-2.41	11.00	13.41
5230.0	-17.08	3.77	10.12	0.69	0.00	-2.50	11.00	13.50
5270.0	-17.72	3.78	10.11	0.69	0.00	-3.14	11.00	14.14
5310.0	-17.63	3.79	10.11	0.69	0.00	-3.04	11.00	14.04
5510.0	-17.43	3.43	10.11	0.69	0.00	-3.20	11.00	14.20
5550.0	-17.45	3.44	10.11	0.69	0.00	-3.21	11.00	14.21
5670.0	-17.55	3.45	10.10	0.69	0.00	-3.31	11.00	14.31
5755.0	-20.95	3.47	10.09	0.69	0.27	-6.44	30.00	36.44
5795.0	-21.00	3.47	10.09	0.69	0.27	-6.48	30.00	36.48

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator + Duty factor + Correct

11ac-40

Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor [dB]	Correction factor [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
5190.0	-16.48	3.76	10.12	0.58	0.00	-2.02	11.00	13.02
5230.0	-17.08	3.77	10.12	0.58	0.00	-2.61	11.00	13.61
5270.0	-17.31	3.78	10.11	0.58	0.00	-2.84	11.00	13.84
5310.0	-17.32	3.79	10.11	0.58	0.00	-2.84	11.00	13.84
5510.0	-17.15	3.43	10.11	0.58	0.00	-3.03	11.00	14.03
5550.0	-17.00	3.44	10.11	0.58	0.00	-2.87	11.00	13.87
5670.0	-17.74	3.45	10.10	0.58	0.00	-3.61	11.00	14.61
5755.0	-21.02	3.47	10.09	0.58	0.27	-6.61	30.00	36.61
5795.0	-20.73	3.47	10.09	0.58	0.27	-6.32	30.00	36.32

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator + Duty factor + Correct

11ac-80

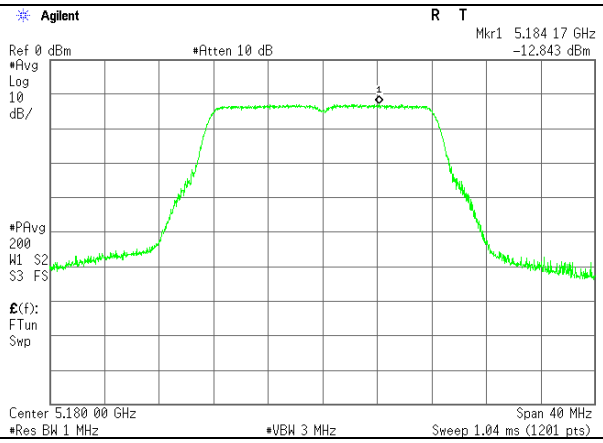
Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor [dB]	Correction factor [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
5210.0	-20.30	3.76	10.12	0.21	0.00	-6.21	11.00	17.21
5290.0	-20.15	3.78	10.11	0.21	0.00	-6.05	11.00	17.05
5530.0	-20.27	3.43	10.11	0.21	0.00	-6.52	11.00	17.52
5610.0	-20.54	3.45	10.10	0.21	0.00	-6.78	11.00	17.78
5775.0	-24.37	3.47	10.09	0.21	0.27	-10.33	30.00	40.33

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator + Duty factor + Correct

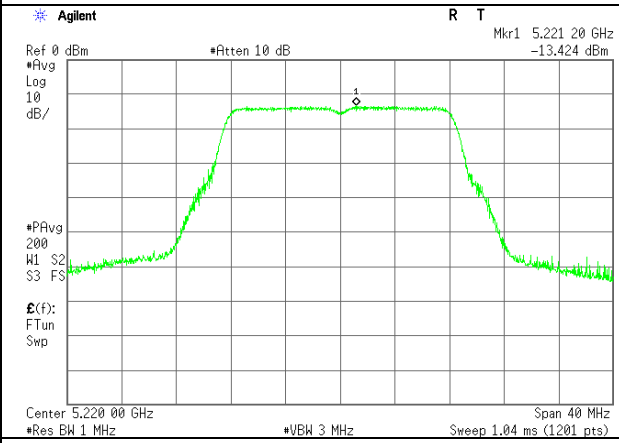
Maximum Power Spectral Density

11a

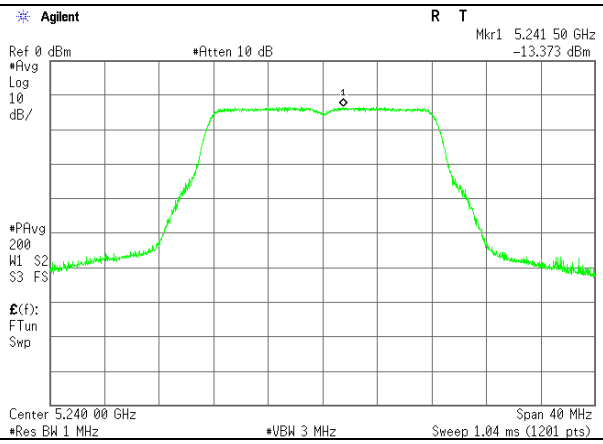
5180MHz



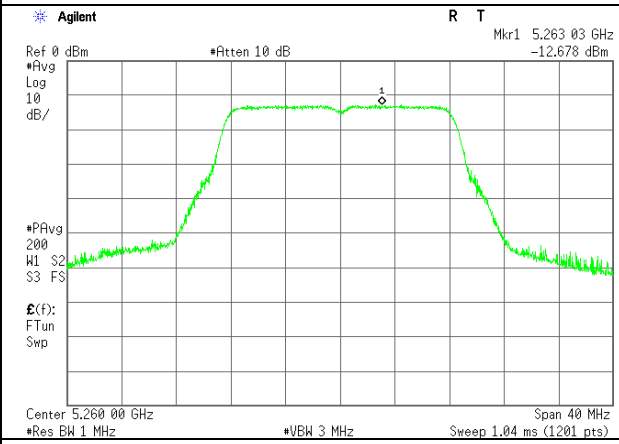
5220MHz



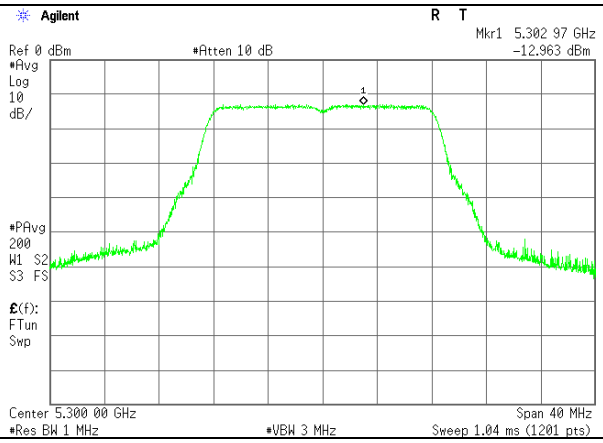
5240MHz



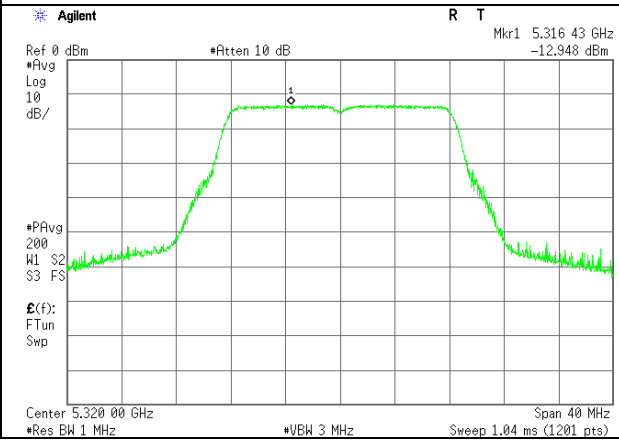
5260MHz



5300MHz



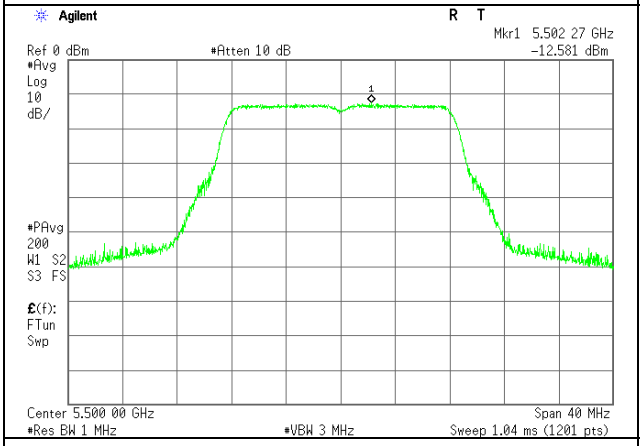
5320MHz



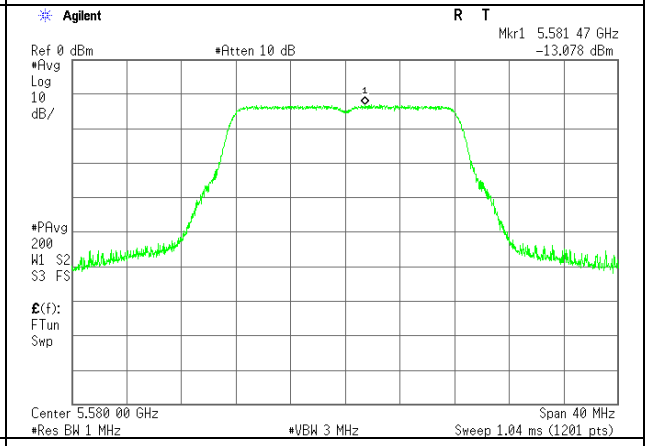
Maximum Power Spectral Density

11a

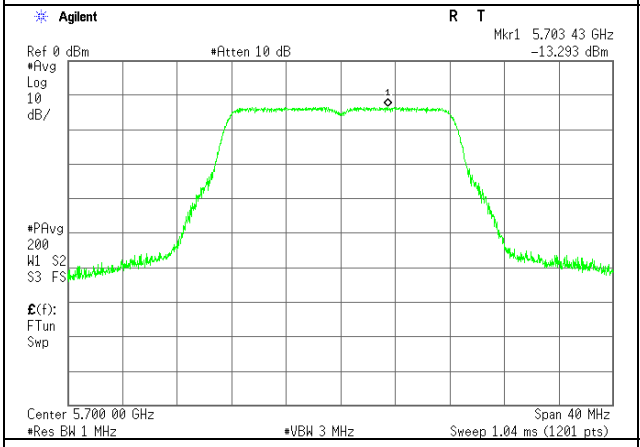
5500MHz



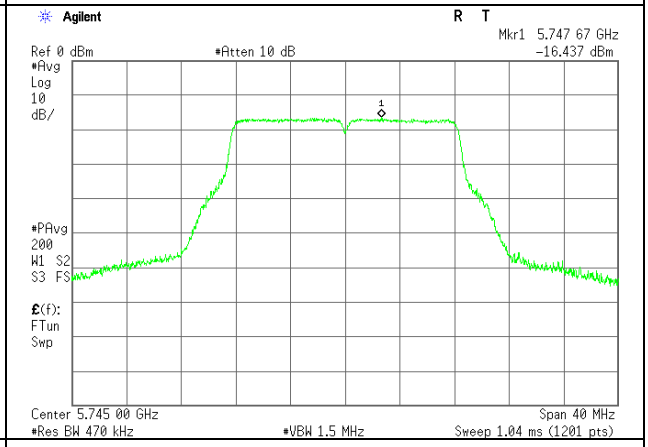
5580MHz



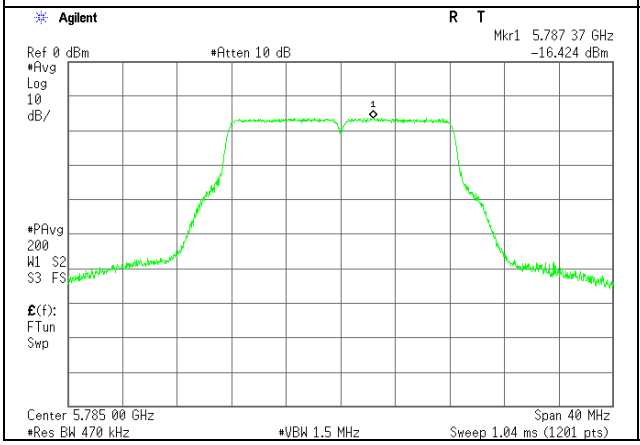
5700MHz



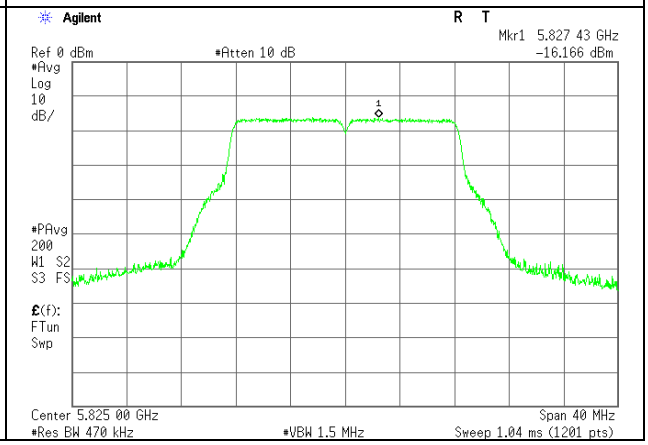
5745MHz



5785MHz



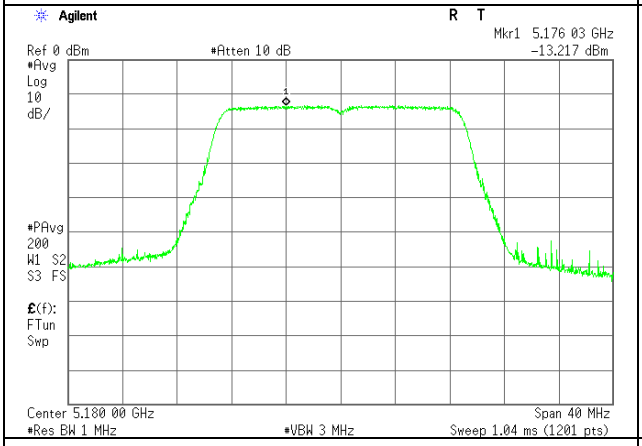
5825MHz



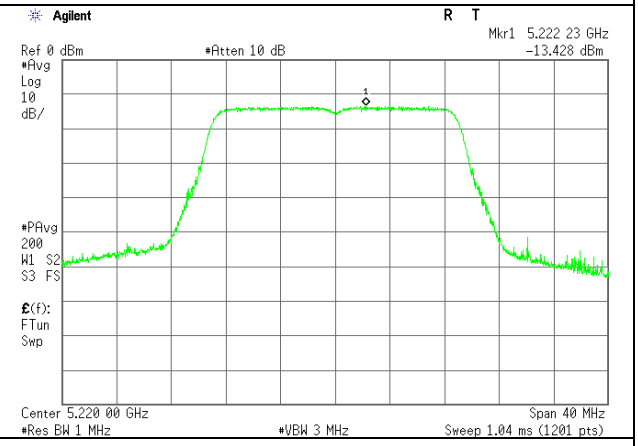
Maximum Power Spectral Density

11n-20

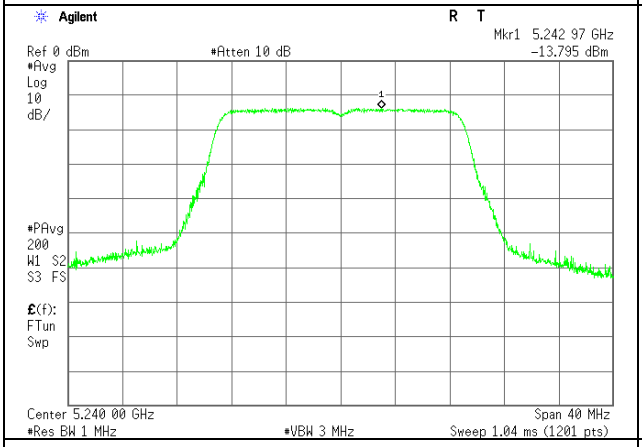
5180MHz



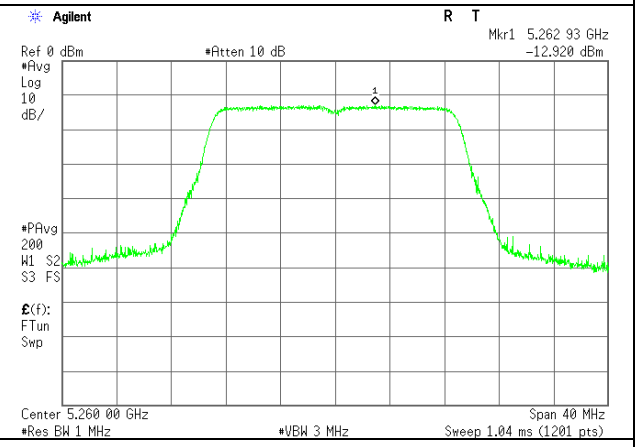
5220MHz



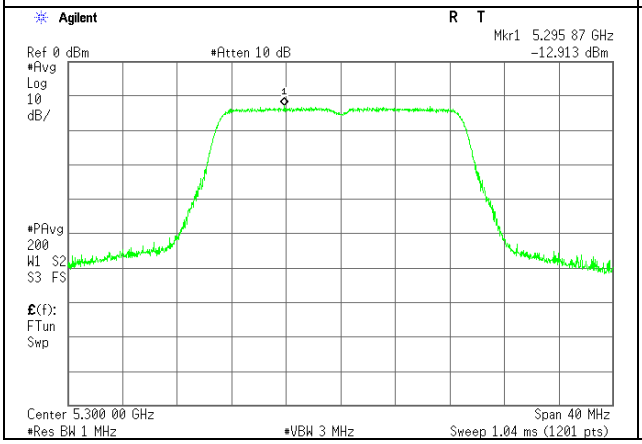
5240MHz



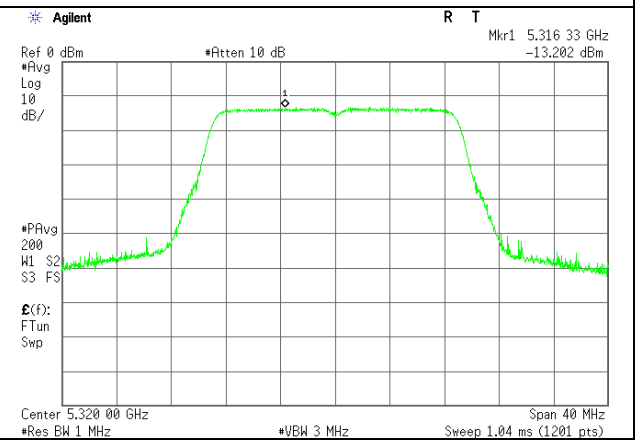
5260MHz



5300MHz



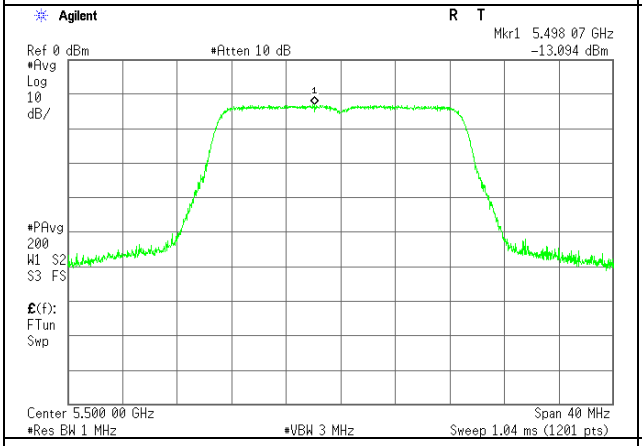
5320MHz



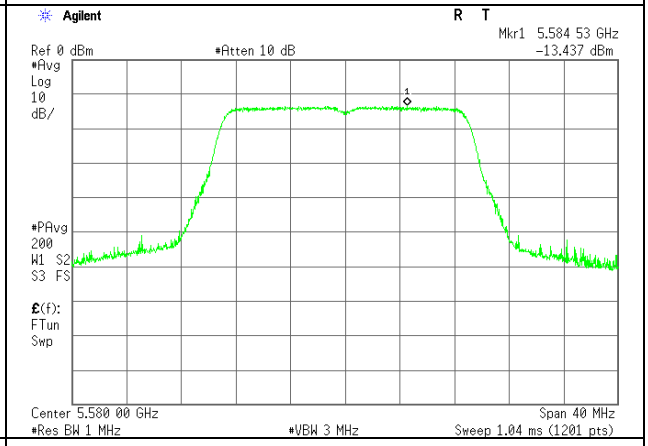
Maximum Power Spectral Density

11n-20

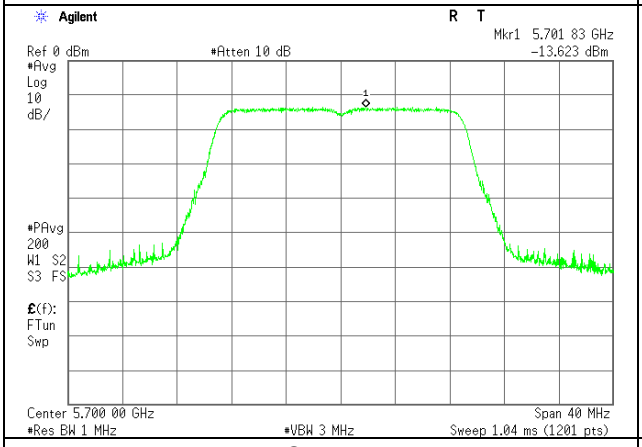
5500MHz



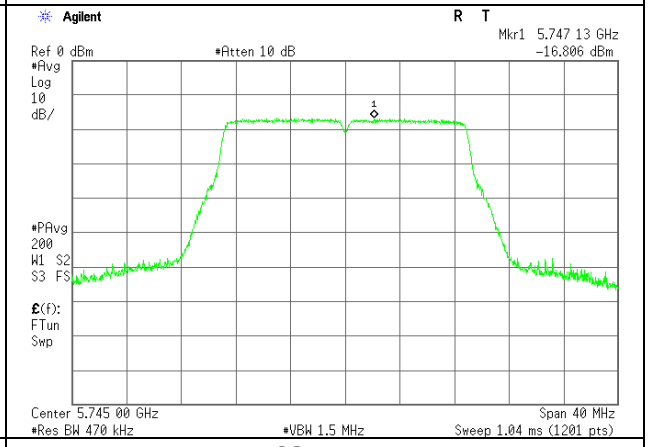
5580MHz



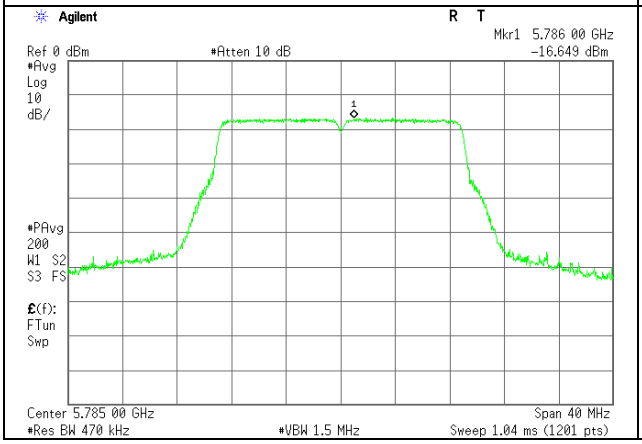
5700MHz



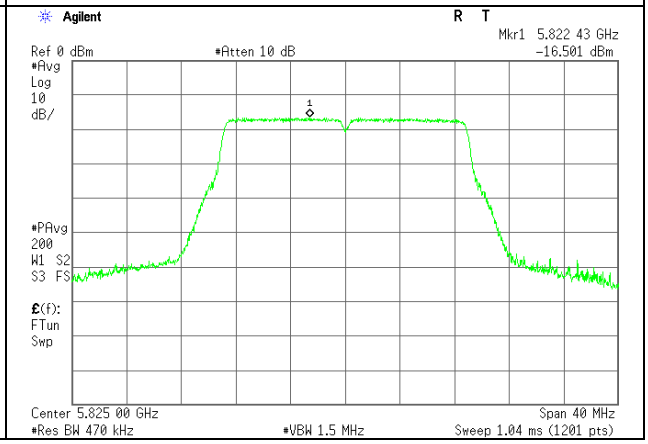
5745MHz



5785MHz



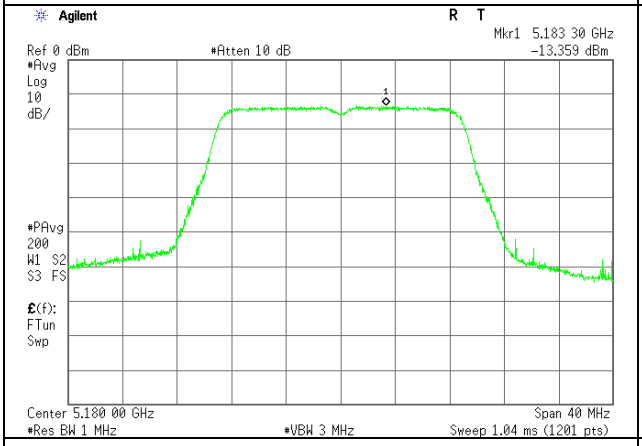
5825MHz



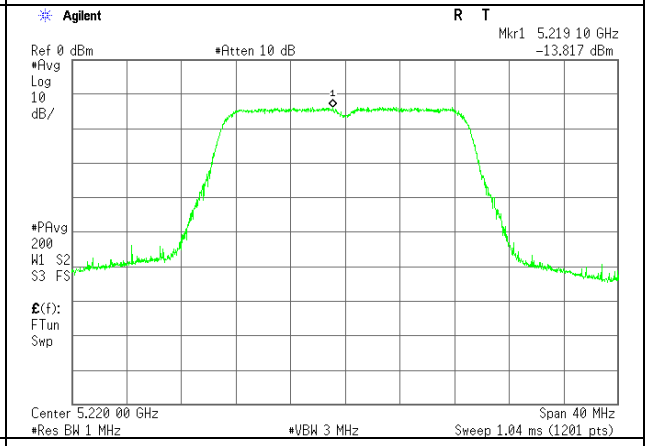
Maximum Power Spectral Density

11ac-20

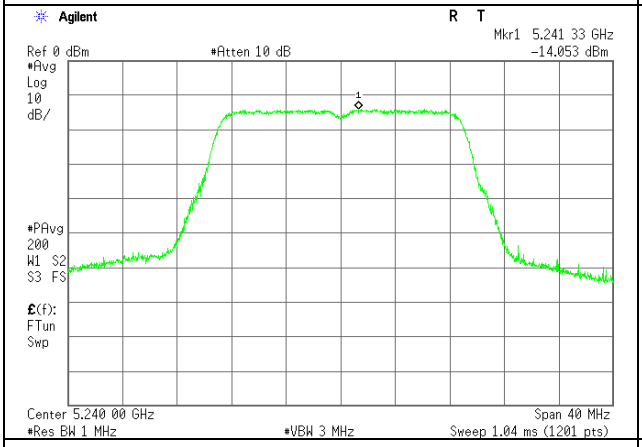
5180MHz



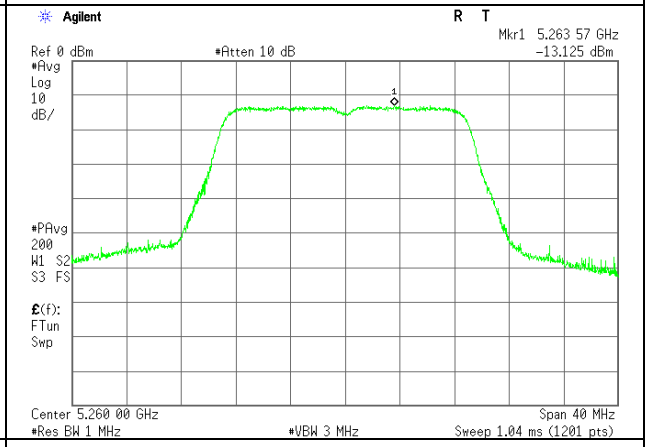
5220MHz



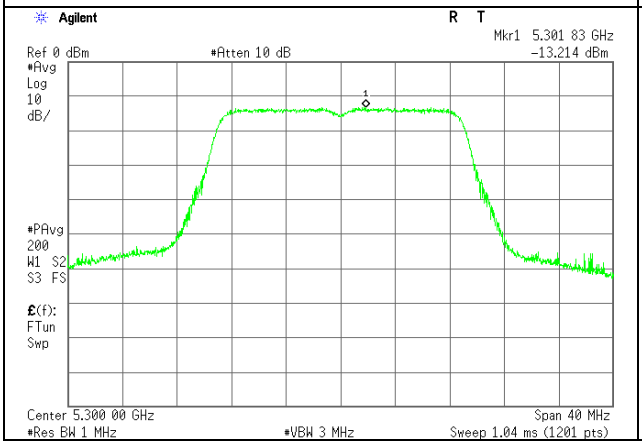
5240MHz



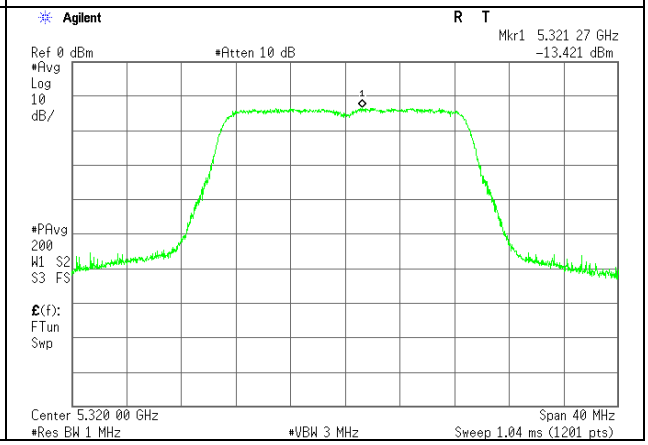
5260MHz



5300MHz



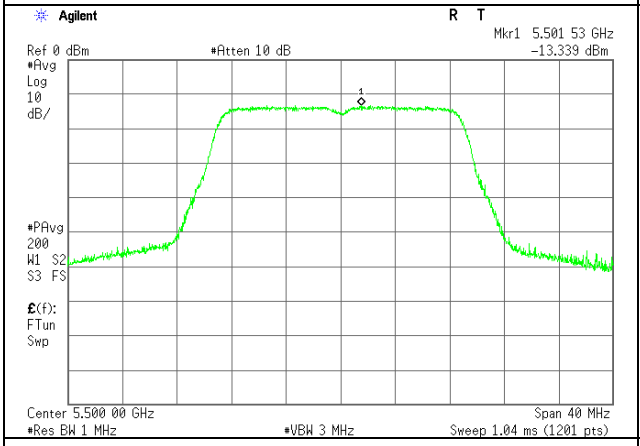
5320MHz



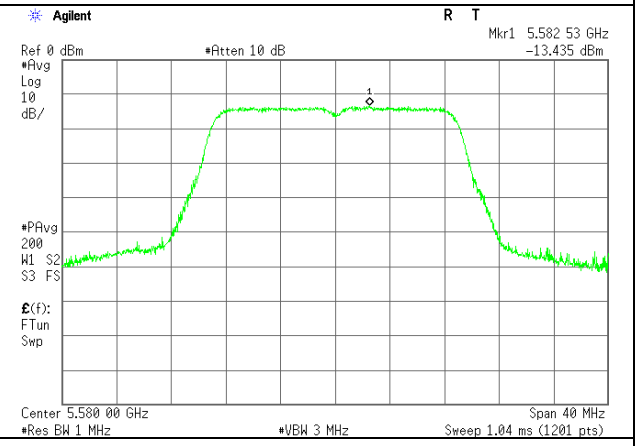
Maximum Power Spectral Density

11ac-20

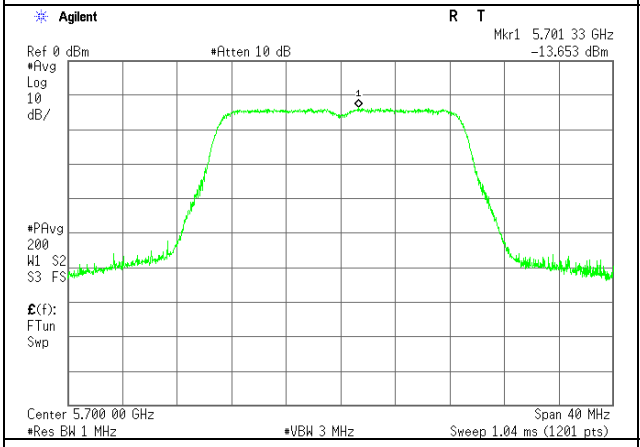
5500MHz



5580MHz



5700MHz



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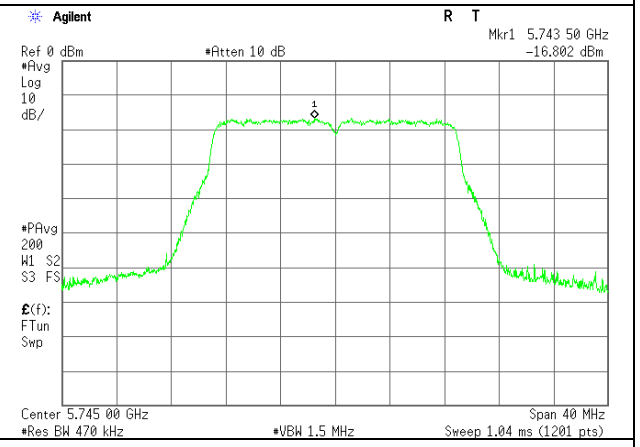
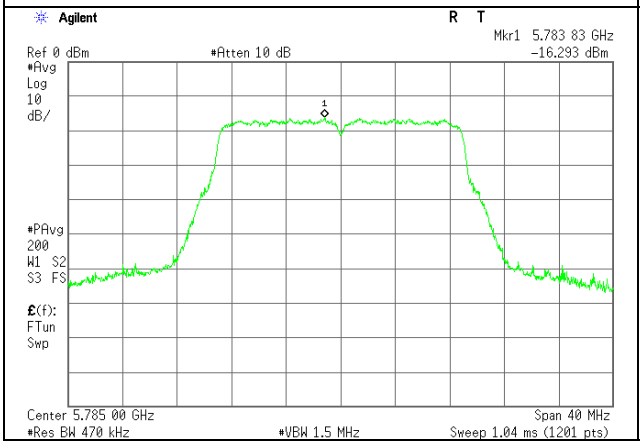
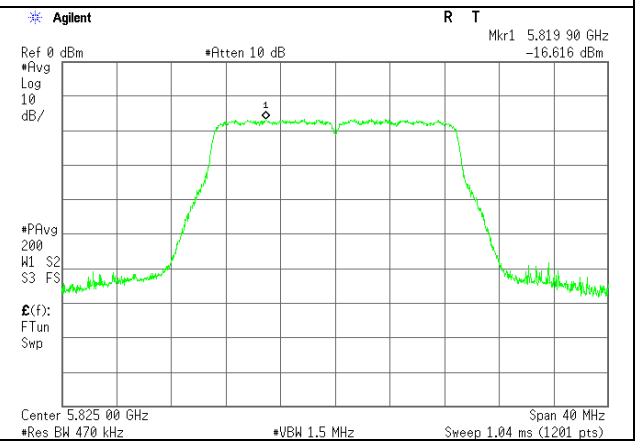


5785MHz



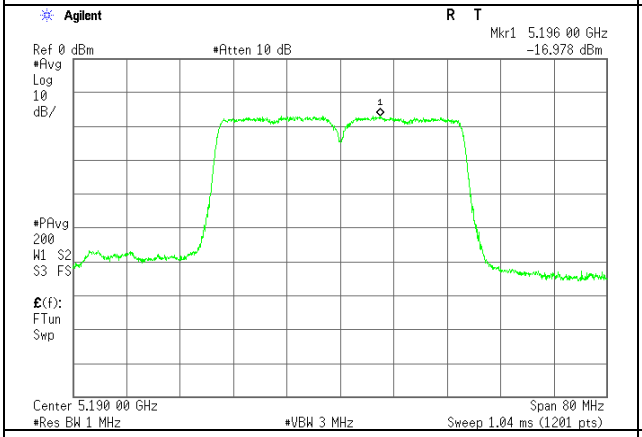
5825MHz



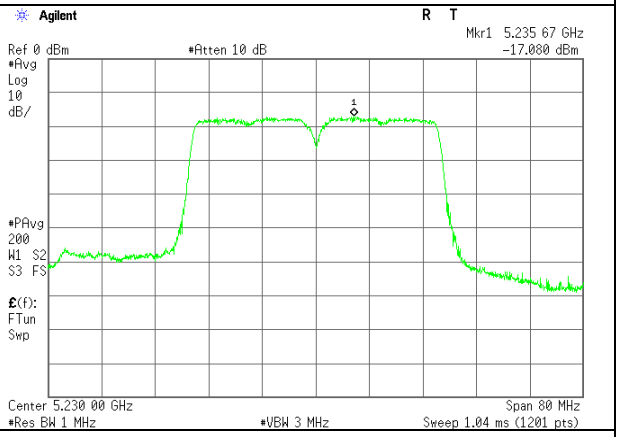
Maximum Power Spectral Density

11n-40

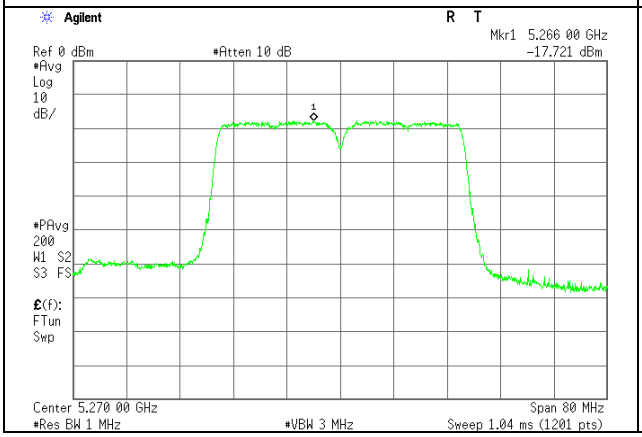
5190MHz



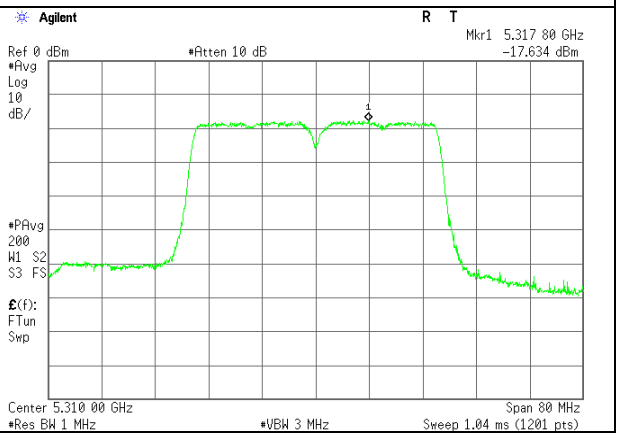
5230MHz



5270MHz



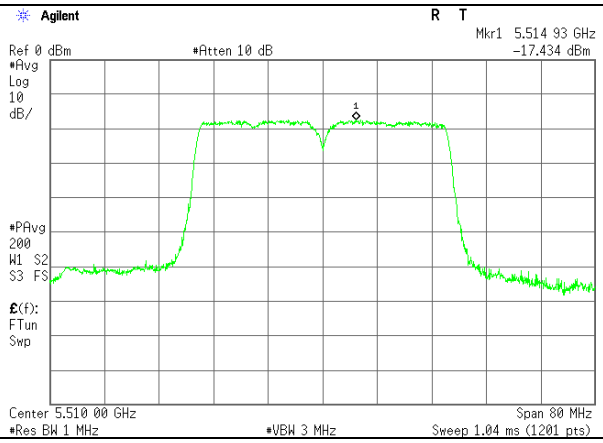
5310MHz



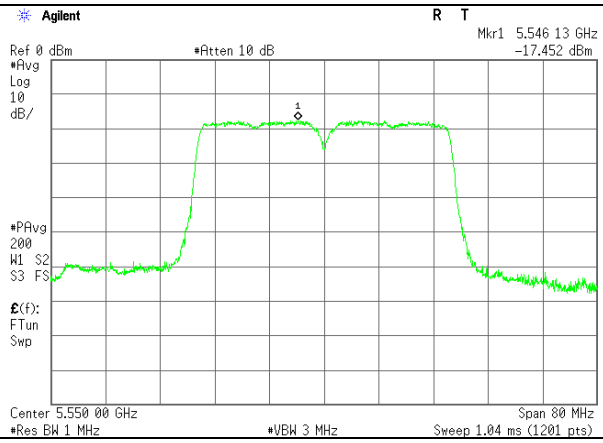
Maximum Power Spectral Density

11n-40

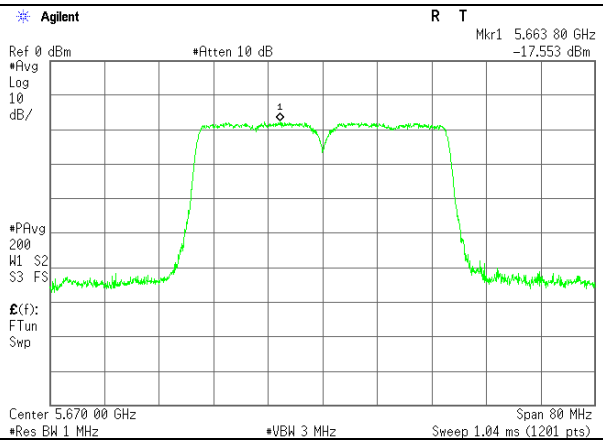
5510MHz



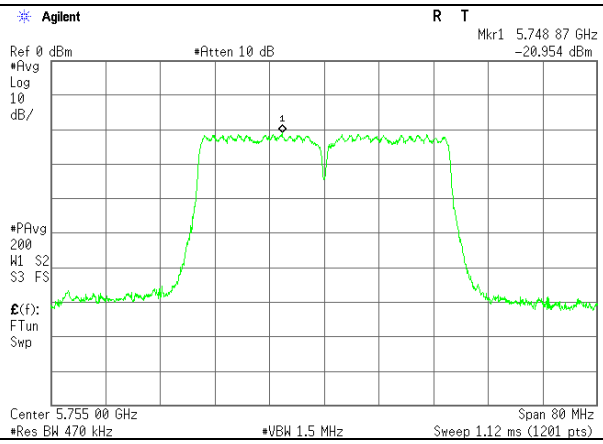
5550MHz



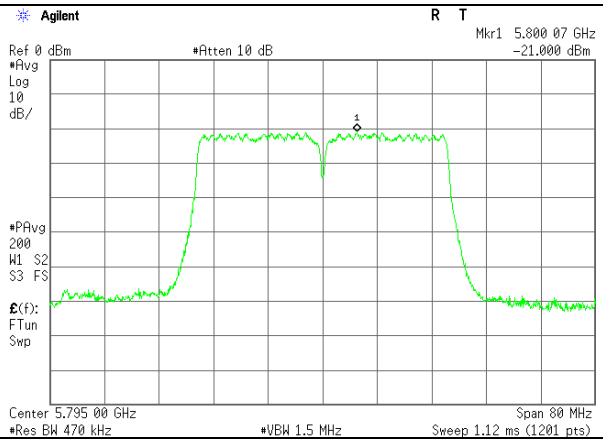
5670MHz



5755MHz



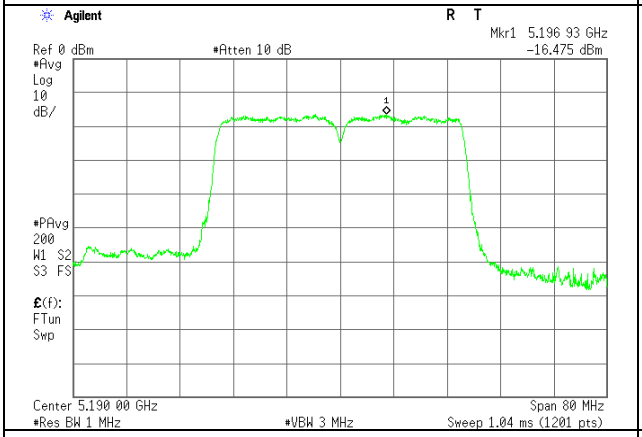
5795MHz



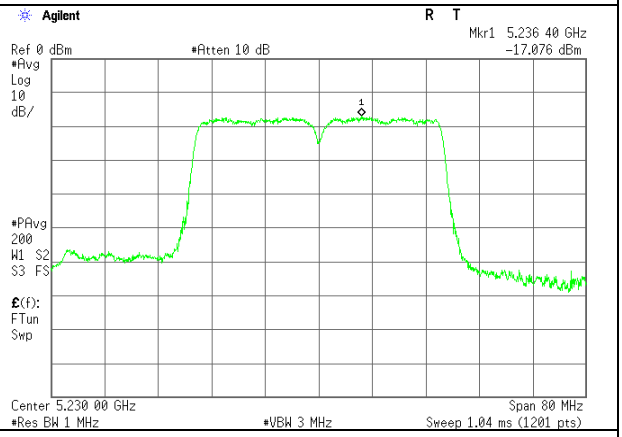
Maximum Power Spectral Density

11ac-40

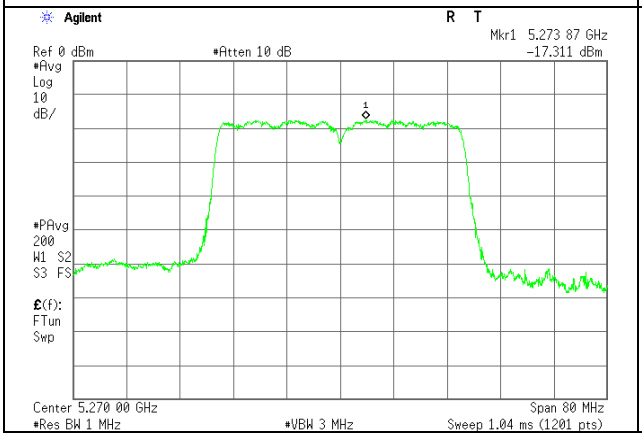
5190MHz



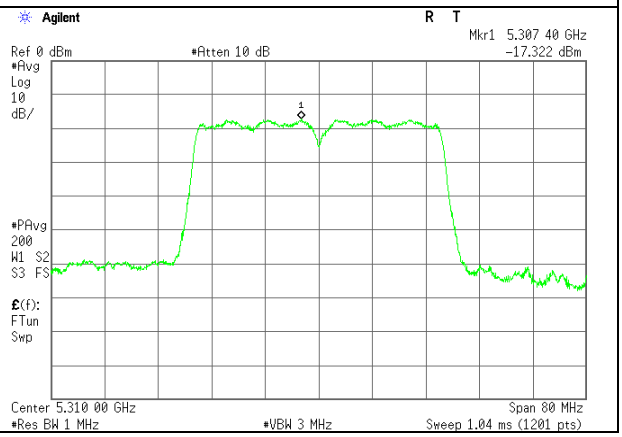
5230MHz



5270MHz



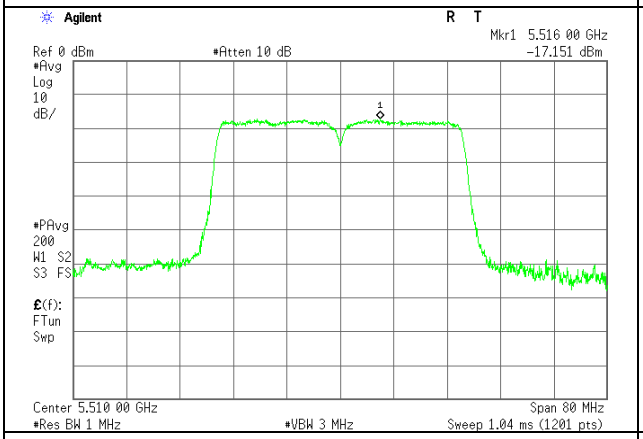
5310MHz



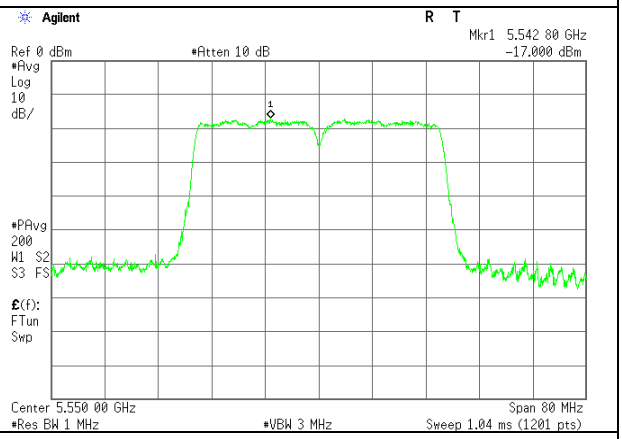
Maximum Power Spectral Density

11ac-40

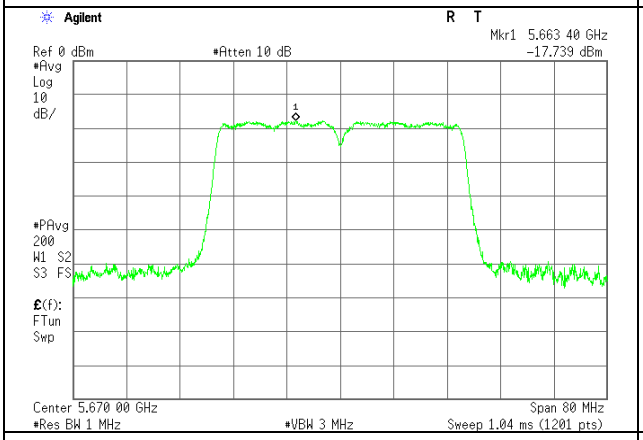
5510MHz



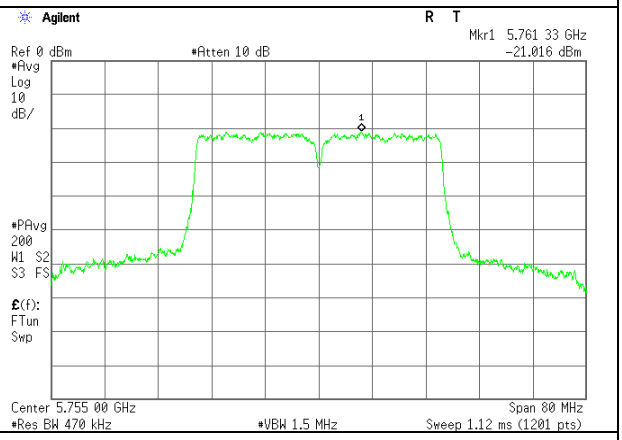
5550MHz



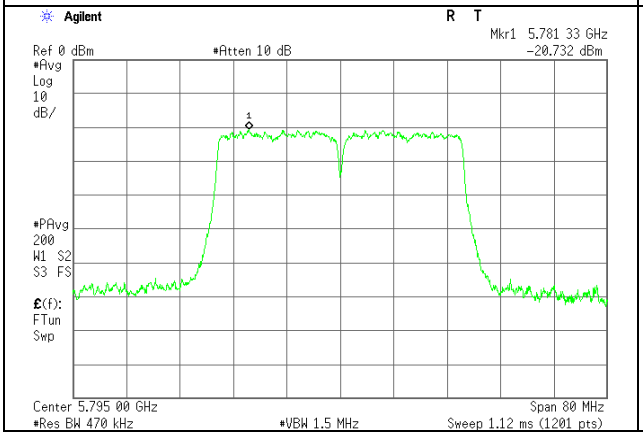
5670MHz



5755MHz



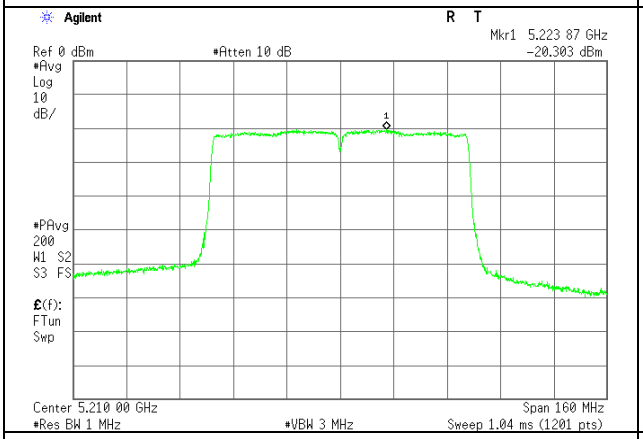
5795MHz



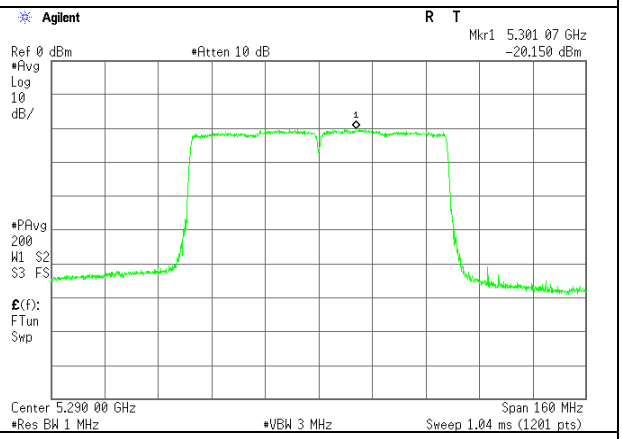
Maximum Power Spectral Density

11ac-80

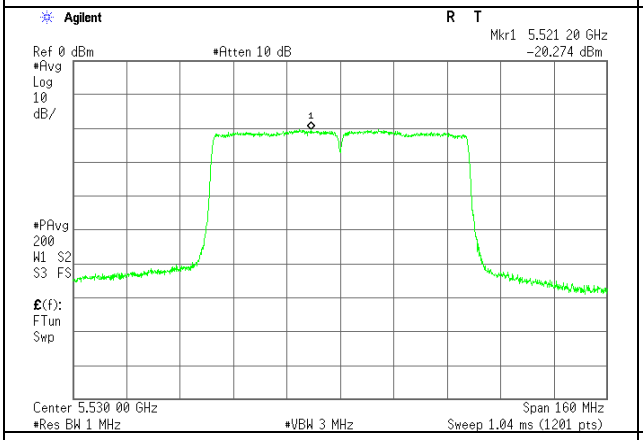
5210MHz



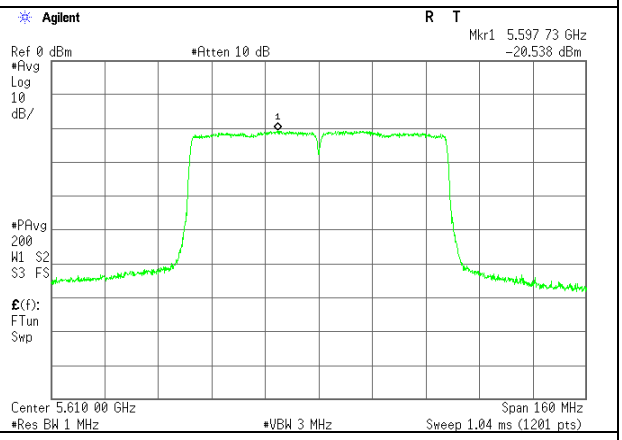
5290MHz



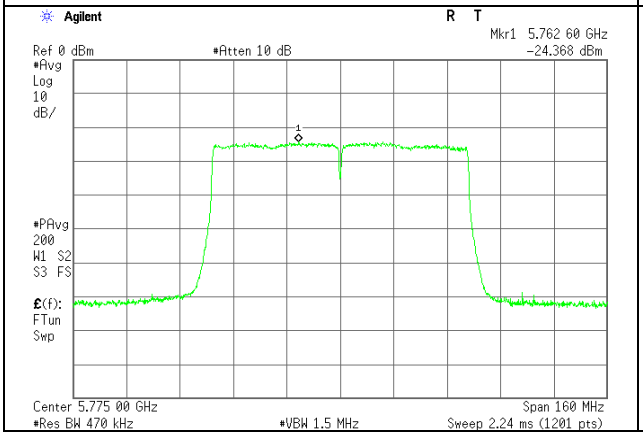
5530MHz



5610MHz



5775MHz



Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11a Tx 5180MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	55.3	31.3	3.7	31.7	58.6	73.9	15.3	
Hori	5150.000	AV	41.6	31.3	3.7	31.7	44.9	53.9	9.0	
Vert	5150.000	PK	54.6	31.3	3.7	31.7	57.9	73.9	16.0	
Vert	5150.000	AV	39.4	31.3	3.7	31.7	42.7	53.9	11.2	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11a Tx 5320MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	56.4	31.6	3.8	31.7	60.1	73.9	13.8	
Hori	5350.000	AV	42.4	31.6	3.8	31.7	46.1	53.9	7.8	
Vert	5350.000	PK	54.0	31.6	3.8	31.7	57.7	73.9	16.2	
Vert	5350.000	AV	42.1	31.6	3.8	31.7	45.8	53.9	8.1	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui (1-10GHz)
Mode	11a Tx 5500MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5470.000	PK	60.8	31.8	3.8	31.8	64.6	73.9	9.3	
Hori	5470.000	AV	45.8	31.8	3.8	31.8	49.6	53.9	4.3	
Vert	5470.000	PK	62.8	31.8	3.8	31.8	66.6	73.9	7.3	
Vert	5470.000	AV	47.7	31.8	3.8	31.8	51.5	53.9	2.4	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11a Tx 5700MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	61.8	32.1	3.9	31.8	66.0	73.9	7.9	
Hori	5725.000	AV	45.1	32.1	3.9	31.8	49.3	53.9	4.6	
Vert	5725.000	PK	61.9	32.1	3.9	31.8	66.1	73.9	7.8	
Vert	5725.000	AV	45.5	32.1	3.9	31.8	49.7	53.9	4.2	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11a Tx 5745MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	63.6	32.1	3.9	31.8	67.8	73.9	6.1	
Hori	5725.000	AV	48.8	32.1	3.9	31.8	53.0	53.9	0.9	
Vert	5725.000	PK	64.7	32.1	3.9	31.8	68.9	73.9	5.0	
Vert	5725.000	AV	43.5	32.1	3.9	31.8	47.7	53.9	6.2	Integration Method

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11a Tx 5825MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5850.000	PK	61.5	32.2	4.0	31.8	65.9	73.9	8.0	
Hori	5850.000	AV	44.2	32.2	4.0	31.8	48.6	53.9	5.3	
Vert	5850.000	PK	59.1	32.2	4.0	31.8	63.5	73.9	10.4	
Vert	5850.000	AV	44.8	32.2	4.0	31.8	49.2	53.9	4.7	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH
Engineer	Tomoki Matsui (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)
Mode	11n-20 Tx 5180MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	65.5	31.3	3.7	31.7	68.8	73.9	5.1	
Hori	10360.000	PK	48.3	38.8	-2.3	33.6	51.2	73.9	22.7	
Hori	15540.000	PK	43.0	39.1	-0.9	32.1	49.1	73.9	24.8	Floor Noise
Hori	20720.000	PK	45.1	37.6	-1.8	32.2	48.7	73.9	25.2	Floor Noise
Hori	25900.000	PK	46.3	38.5	-0.6	30.3	53.9	73.9	20.0	Floor Noise
Hori	31080.000	PK	63.1	42.8	0.8	73.3	33.4	73.9	40.5	Floor Noise
Hori	36260.000	PK	62.0	44.0	2.5	75.7	32.8	73.9	41.1	Floor Noise
Hori	5150.000	AV	46.8	31.3	3.7	31.7	50.1	53.9	3.8	
Hori	10360.000	AV	40.4	38.8	-2.3	33.6	43.3	53.9	10.6	
Hori	15540.000	AV	34.7	39.1	-0.9	32.1	40.8	53.9	13.1	Floor Noise
Hori	20720.000	AV	37.1	37.6	-1.8	32.2	40.7	53.9	13.2	Floor Noise
Hori	25900.000	AV	38.4	38.5	-0.6	30.3	46.0	53.9	7.9	Floor Noise
Hori	31080.000	AV	54.2	42.8	0.8	73.3	24.5	53.9	29.4	Floor Noise
Hori	36260.000	AV	53.8	44.0	2.5	75.7	24.6	53.9	29.3	Floor Noise
Vert	5150.000	PK	61.5	31.3	3.7	31.7	64.8	73.9	9.1	
Vert	10360.000	PK	52.1	38.8	-2.3	33.6	55.0	73.9	18.9	
Vert	15540.000	PK	43.2	39.1	-0.9	32.1	49.3	73.9	24.6	Floor Noise
Vert	20720.000	PK	44.9	37.6	-1.8	32.2	48.5	73.9	25.4	Floor Noise
Vert	25900.000	PK	46.6	38.5	-0.6	30.3	54.2	73.9	19.7	Floor Noise
Vert	31080.000	PK	62.8	42.8	0.8	73.3	33.1	73.9	40.8	Floor Noise
Vert	36260.000	PK	62.4	44.0	2.5	75.7	33.2	73.9	40.7	Floor Noise
Vert	5150.000	AV	40.8	31.3	3.7	31.7	44.1	53.9	9.8	
Vert	10360.000	AV	44.0	38.8	-2.3	33.6	46.9	53.9	7.0	
Vert	15540.000	AV	34.8	39.1	-0.9	32.1	40.9	53.9	13.0	Floor Noise
Vert	20720.000	AV	36.7	37.6	-1.8	32.2	40.3	53.9	13.6	Floor Noise
Vert	25900.000	AV	38.5	38.5	-0.6	30.3	46.1	53.9	7.8	Floor Noise
Vert	31080.000	AV	54.2	42.8	0.8	73.3	24.5	53.9	29.4	Floor Noise
Vert	36260.000	AV	54.1	44.0	2.5	75.7	24.9	53.9	29.0	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Report No.	10662332H			
Date	01/23/2015	01/26/2015	01/27/2015	01/27/2015
Temperature/ Humidity	22deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH	25deg. C / 35% RH
Engineer	Takafumi Noguchi (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)	Koji Yamamoto (Below 1GHz)
Mode	11n-20 Tx 5260MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	91.068	QP	30.6	8.3	7.9	32.1	14.7	43.5	28.8	
Hori	102.902	QP	28.3	10.5	8.1	32.2	14.7	43.5	28.8	
Hori	229.612	QP	42.8	17.0	9.3	32.0	37.1	46.0	8.9	
Hori	275.699	QP	33.8	18.5	9.8	31.9	30.2	46.0	15.8	
Hori	303.984	QP	41.7	14.8	10.0	31.9	34.6	46.0	11.4	
Hori	342.067	QP	38.7	16.0	10.2	31.9	33.0	46.0	13.0	
Hori	10520.000	PK	47.3	38.7	-2.3	33.6	50.1	73.9	23.8	
Hori	15780.000	PK	43.4	38.4	-0.8	32.2	48.8	73.9	25.1	Floor Noise
Hori	21040.000	PK	44.2	37.6	-1.7	32.3	47.8	73.9	26.1	Floor Noise
Hori	26300.000	PK	47.9	38.5	-0.6	29.9	55.9	73.9	18.0	Floor Noise
Hori	31560.000	PK	62.6	43.3	1.1	73.3	33.7	73.9	40.2	Floor Noise
Hori	36820.000	PK	60.6	43.7	2.4	75.7	31.0	73.9	42.9	Floor Noise
Hori	10520.000	AV	38.6	38.7	-2.3	33.6	41.4	53.9	12.5	
Hori	15780.000	AV	34.4	38.4	-0.8	32.2	39.8	53.9	14.1	Floor Noise
Hori	21040.000	AV	36.0	37.6	-1.7	32.3	39.6	53.9	14.3	Floor Noise
Hori	26300.000	AV	38.3	38.5	-0.6	29.9	46.3	53.9	7.6	Floor Noise
Hori	31560.000	AV	53.1	43.3	1.1	73.3	24.2	53.9	29.7	Floor Noise
Hori	36820.000	AV	52.8	43.7	2.4	75.7	23.2	53.9	30.7	Floor Noise
Vert	47.504	QP	36.5	11.5	7.3	32.2	23.1	40.0	16.9	
Vert	102.888	QP	38.8	10.5	8.1	32.2	25.2	43.5	18.3	
Vert	229.799	QP	38.6	17.0	9.3	32.0	32.9	46.0	13.1	
Vert	275.699	QP	35.0	18.5	9.8	31.9	31.4	46.0	14.6	
Vert	314.038	QP	38.0	15.1	10.0	31.9	31.2	46.0	14.8	
Vert	342.199	QP	36.7	16.0	10.2	31.9	31.0	46.0	15.0	
Vert	10520.000	PK	50.6	38.7	-2.3	33.6	53.4	73.9	20.5	
Vert	15780.000	PK	43.4	38.4	-0.8	32.2	48.8	73.9	25.1	Floor Noise
Vert	21040.000	PK	44.2	37.6	-1.7	32.3	47.8	73.9	26.1	Floor Noise
Vert	26300.000	PK	46.8	38.5	-0.6	29.9	54.8	73.9	19.1	Floor Noise
Vert	31560.000	PK	62.4	43.3	1.1	73.3	33.5	73.9	40.4	Floor Noise
Vert	36820.000	PK	61.4	43.7	2.4	75.7	31.8	73.9	42.1	Floor Noise
Vert	10520.000	AV	41.3	38.7	-2.3	33.6	44.1	53.9	9.8	
Vert	15780.000	AV	34.4	38.4	-0.8	32.2	39.8	53.9	14.1	Floor Noise
Vert	21040.000	AV	35.5	37.6	-1.7	32.3	39.1	53.9	14.8	Floor Noise
Vert	26300.000	AV	38.3	38.5	-0.6	29.9	46.3	53.9	7.6	Floor Noise
Vert	31560.000	AV	53.5	43.3	1.1	73.3	24.6	53.9	29.3	Floor Noise
Vert	36820.000	AV	52.8	43.7	2.4	75.7	23.2	53.9	30.7	Floor Noise

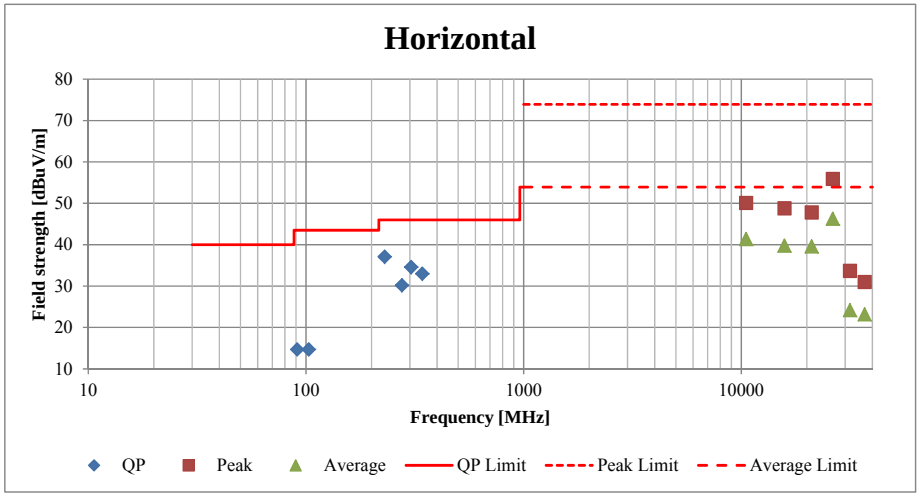
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

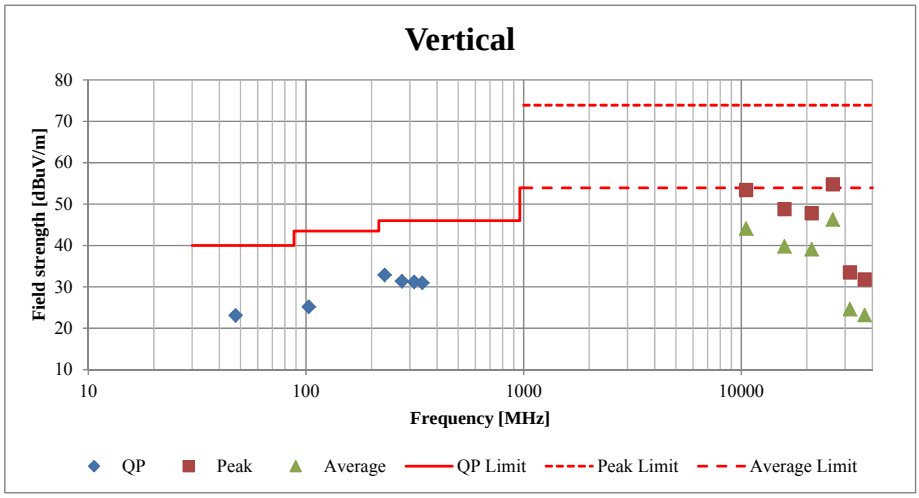
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission
(Plot data, Worst case)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Report No.	10662332H			
Date	01/23/2015	01/26/2015	01/27/2015	01/27/2015
Temperature/ Humidity	22deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH	25deg. C / 35% RH
Engineer	Takafumi Noguchi (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)	Koji Yamamoto (Below 1GHz)
Mode	11n-20 Tx 5260MHz			





Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH
Engineer	Tomoki Matsui (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)
Mode	11n-20 Tx 5320MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	64.3	31.6	3.8	31.7	68.0	73.9	5.9	
Hori	10640.000	PK	48.0	38.7	-2.2	33.7	50.8	73.9	23.1	
Hori	15960.000	PK	43.4	37.8	-0.7	32.3	48.2	73.9	25.7	Floor Noise
Hori	21280.000	PK	43.3	37.6	-1.7	32.3	46.9	73.9	27.0	Floor Noise
Hori	26600.000	PK	67.4	44.0	-0.5	77.3	33.6	73.9	40.3	Floor Noise
Hori	31920.000	PK	62.6	43.7	1.3	73.3	34.3	73.9	39.6	Floor Noise
Hori	37240.000	PK	62.6	43.8	2.6	75.5	33.5	73.9	40.4	Floor Noise
Hori	5350.000	AV	48.1	31.6	3.8	31.7	51.8	53.9	2.1	
Hori	10640.000	AV	38.1	38.7	-2.2	33.7	40.9	53.9	13.0	
Hori	15960.000	AV	34.2	37.8	-0.7	32.3	39.0	53.9	14.9	Floor Noise
Hori	21280.000	AV	35.4	37.6	-1.7	32.3	39.0	53.9	14.9	Floor Noise
Hori	26600.000	AV	59.1	44.0	-0.5	77.3	25.3	53.9	28.6	Floor Noise
Hori	31920.000	AV	53.9	43.7	1.3	73.3	25.6	53.9	28.3	Floor Noise
Hori	37240.000	AV	53.4	43.8	2.6	75.5	24.3	53.9	29.6	Floor Noise
Vert	5350.000	PK	64.3	31.6	3.8	31.7	68.0	73.9	5.9	
Vert	10640.000	PK	50.4	38.7	-2.2	33.7	53.2	73.9	20.7	
Vert	15960.000	PK	42.7	37.8	-0.7	32.3	47.5	73.9	26.4	Floor Noise
Vert	21280.000	PK	44.3	37.6	-1.7	32.3	47.9	73.9	26.0	Floor Noise
Vert	26600.000	PK	68.9	44.0	-0.5	77.3	35.1	73.9	38.8	Floor Noise
Vert	31920.000	PK	62.1	43.7	1.3	73.3	33.8	73.9	40.1	Floor Noise
Vert	37240.000	PK	62.2	43.8	2.6	75.5	33.1	73.9	40.8	Floor Noise
Vert	5350.000	AV	48.6	31.6	3.8	31.7	52.3	53.9	1.6	
Vert	10640.000	AV	39.3	38.7	-2.2	33.7	42.1	53.9	11.8	
Vert	15960.000	AV	34.0	37.8	-0.7	32.3	38.8	53.9	15.1	Floor Noise
Vert	21280.000	AV	35.6	37.6	-1.7	32.3	39.2	53.9	14.7	Floor Noise
Vert	26600.000	AV	59.8	44.0	-0.5	77.3	26.0	53.9	27.9	Floor Noise
Vert	31920.000	AV	53.7	43.7	1.3	73.3	25.4	53.9	28.5	Floor Noise
Vert	37240.000	AV	53.7	43.8	2.6	75.5	24.6	53.9	29.3	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH
Engineer	Tomoki Matsui (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)
Mode	11n-20 Tx 5500MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5470.000	PK	63.4	31.8	3.8	31.8	67.2	73.9	6.7	
Hori	11000.000	PK	44.3	38.8	-2.0	33.7	47.4	73.9	26.5	
Hori	16500.000	PK	33.1	38.9	-0.5	32.2	39.3	73.9	34.6	Floor Noise
Hori	22000.000	PK	44.7	37.6	-1.4	32.1	48.8	73.9	25.1	Floor Noise
Hori	27500.000	PK	68.2	43.7	-0.1	77.6	34.2	73.9	39.7	Floor Noise
Hori	33000.000	PK	63.4	43.4	1.8	74.2	34.4	73.9	39.5	Floor Noise
Hori	38500.000	PK	61.6	44.0	3.3	75.2	33.7	73.9	40.2	Floor Noise
Hori	5470.000	AV	46.2	31.8	3.8	31.8	50.0	53.9	3.9	
Hori	11000.000	AV	36.3	38.8	-2.0	33.7	39.4	53.9	14.5	
Hori	16500.000	AV	34.4	38.9	-0.5	32.2	40.6	53.9	13.3	Floor Noise
Hori	22000.000	AV	35.9	37.6	-1.4	32.1	40.0	53.9	13.9	Floor Noise
Hori	27500.000	AV	59.3	43.7	-0.1	77.6	25.3	53.9	28.6	Floor Noise
Hori	33000.000	AV	54.3	43.4	1.8	74.2	25.3	53.9	28.6	Floor Noise
Hori	38500.000	AV	52.8	44.0	3.3	75.2	24.9	53.9	29.0	Floor Noise
Vert	5470.000	PK	66.9	31.8	3.8	31.8	70.7	73.9	3.2	
Vert	11000.000	PK	45.3	38.8	-2.0	33.7	48.4	73.9	25.5	
Vert	16500.000	PK	41.1	38.9	-0.5	32.2	47.3	73.9	26.6	Floor Noise
Vert	22000.000	PK	44.3	37.6	-1.4	32.1	48.4	73.9	25.5	Floor Noise
Vert	27500.000	PK	68.2	43.7	-0.1	77.6	34.2	73.9	39.7	Floor Noise
Vert	33000.000	PK	62.8	43.4	1.8	74.2	33.8	73.9	40.1	Floor Noise
Vert	38500.000	PK	60.7	44.0	3.3	75.2	32.8	73.9	41.1	Floor Noise
Vert	5470.000	AV	49.2	31.8	3.8	31.8	53.0	53.9	0.9	
Vert	11000.000	AV	35.4	38.8	-2.0	33.7	38.5	53.9	15.4	
Vert	16500.000	AV	34.3	38.9	-0.5	32.2	40.5	53.9	13.4	Floor Noise
Vert	22000.000	AV	36.1	37.6	-1.4	32.1	40.2	53.9	13.7	Floor Noise
Vert	27500.000	AV	59.6	43.7	-0.1	77.6	25.6	53.9	28.3	Floor Noise
Vert	33000.000	AV	54.3	43.4	1.8	74.2	25.3	53.9	28.6	Floor Noise
Vert	38500.000	AV	52.8	44.0	3.3	75.2	24.9	53.9	29.0	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/23/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH
Engineer	Takafumi Noguchi (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)
Mode	11n-20 Tx 5580MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11160.000	PK	43.7	39.0	-1.9	33.7	47.1	73.9	26.8	
Hori	16740.000	PK	42.7	39.5	-0.5	32.2	49.5	73.9	24.4	Floor Noise
Hori	22320.000	PK	44.6	37.7	-1.3	31.9	49.1	73.9	24.8	Floor Noise
Hori	27900.000	PK	66.4	43.6	-0.1	77.7	32.2	73.9	41.7	Floor Noise
Hori	33480.000	PK	62.8	43.7	1.9	74.5	33.9	73.9	40.0	Floor Noise
Hori	39060.000	PK	60.3	43.5	3.3	75.2	31.9	73.9	42.0	Floor Noise
Hori	11160.000	AV	35.2	39.0	-1.9	33.7	38.6	53.9	15.3	
Hori	16740.000	AV	34.3	39.5	-0.5	32.2	41.1	53.9	12.8	Floor Noise
Hori	22320.000	AV	36.5	37.7	-1.3	31.9	41.0	53.9	12.9	Floor Noise
Hori	27900.000	AV	58.1	43.6	-0.1	77.7	23.9	53.9	30.0	Floor Noise
Hori	33480.000	AV	54.7	43.7	1.9	74.5	25.8	53.9	28.1	Floor Noise
Hori	39060.000	AV	52.2	43.5	3.3	75.2	23.8	53.9	30.1	Floor Noise
Vert	11160.000	PK	43.7	39.0	-1.9	33.7	47.1	73.9	26.8	
Vert	16740.000	PK	42.9	39.5	-0.5	32.2	49.7	73.9	24.2	Floor Noise
Vert	22320.000	PK	45.1	37.7	-1.3	31.9	49.6	73.9	24.3	Floor Noise
Vert	27900.000	PK	66.4	43.6	-0.1	77.7	32.2	73.9	41.7	Floor Noise
Vert	33480.000	PK	62.7	43.7	1.9	74.5	33.8	73.9	40.1	Floor Noise
Vert	39060.000	PK	60.3	43.5	3.3	75.2	31.9	73.9	42.0	Floor Noise
Vert	11160.000	AV	33.8	39.0	-1.9	33.7	37.2	53.9	16.7	
Vert	16740.000	AV	34.6	39.5	-0.5	32.2	41.4	53.9	12.5	Floor Noise
Vert	22320.000	AV	36.5	37.7	-1.3	31.9	41.0	53.9	12.9	Floor Noise
Vert	27900.000	AV	58.0	43.6	-0.1	77.7	23.8	53.9	30.1	Floor Noise
Vert	33480.000	AV	54.4	43.7	1.9	74.5	25.5	53.9	28.4	Floor Noise
Vert	39060.000	AV	52.3	43.5	3.3	75.2	23.9	53.9	30.0	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH
Engineer	Tomoki Matsui (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)
Mode	11n-20 Tx 5700MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	65.9	32.1	3.9	31.8	70.1	73.9	3.8	
Hori	11400.000	PK	43.4	39.4	-2.0	33.6	47.2	73.9	26.7	
Hori	17100.000	PK	44.4	41.0	-0.3	32.2	52.9	73.9	21.0	Floor Noise
Hori	22800.000	PK	45.4	37.8	-1.1	31.7	50.4	73.9	23.5	Floor Noise
Hori	28500.000	PK	63.8	43.8	0.1	76.0	31.7	73.9	42.2	Floor Noise
Hori	34200.000	PK	64.1	44.0	2.1	74.9	35.3	73.9	38.6	Floor Noise
Hori	39900.000	PK	58.9	44.4	3.1	74.2	32.2	73.9	41.7	Floor Noise
Hori	5725.000	AV	49.2	32.1	3.9	31.8	53.4	53.9	0.5	
Hori	11400.000	AV	34.2	39.4	-2.0	33.6	38.0	53.9	15.9	
Hori	17100.000	AV	34.8	41.0	-0.3	32.2	43.3	53.9	10.6	Floor Noise
Hori	22800.000	AV	37.4	37.8	-1.1	31.7	42.4	53.9	11.5	Floor Noise
Hori	28500.000	AV	55.1	43.8	0.1	76.0	23.0	53.9	30.9	Floor Noise
Hori	34200.000	AV	55.1	44.0	2.1	74.9	26.3	53.9	27.6	Floor Noise
Hori	39900.000	AV	50.9	44.4	3.1	74.2	24.2	53.9	29.7	Floor Noise
Vert	5725.000	PK	66.3	32.1	3.9	31.8	70.5	73.9	3.4	
Vert	11400.000	PK	44.2	39.4	-2.0	33.6	48.0	73.9	25.9	
Vert	17100.000	PK	43.6	41.0	-0.3	32.2	52.1	73.9	21.8	Floor Noise
Vert	22800.000	PK	45.7	37.8	-1.1	31.7	50.7	73.9	23.2	Floor Noise
Vert	28500.000	PK	64.3	43.8	0.1	76.0	32.2	73.9	41.7	Floor Noise
Vert	34200.000	PK	64.9	44.0	2.1	74.9	36.1	73.9	37.8	Floor Noise
Vert	39900.000	PK	59.3	44.4	3.1	74.2	32.6	73.9	41.3	Floor Noise
Vert	5725.000	AV	43.6	32.1	3.9	31.8	47.8	53.9	6.1	Integration Method
Vert	11400.000	AV	34.3	39.4	-2.0	33.6	38.1	53.9	15.8	
Vert	17100.000	AV	34.7	41.0	-0.3	32.2	43.2	53.9	10.7	Floor Noise
Vert	22800.000	AV	37.4	37.8	-1.1	31.7	42.4	53.9	11.5	Floor Noise
Vert	28500.000	AV	56.0	43.8	0.1	76.0	23.9	53.9	30.0	Floor Noise
Vert	34200.000	AV	55.3	44.0	2.1	74.9	26.5	53.9	27.4	Floor Noise
Vert	39900.000	AV	51.1	44.4	3.1	74.2	24.4	53.9	29.5	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH
Engineer	Tomoki Matsui (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)
Mode	11n-20 Tx 5745MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	68.5	32.1	3.9	31.8	72.7	73.9	1.2	
Hori	11490.000	PK	42.9	39.6	-2.0	33.6	46.9	73.9	27.0	
Hori	17235.000	PK	43.8	42.1	-0.2	32.2	53.5	73.9	20.4	Floor Noise
Hori	22980.000	PK	45.0	37.9	-1.0	31.6	50.3	73.9	23.6	Floor Noise
Hori	28725.000	PK	62.1	43.9	0.2	75.3	30.9	73.9	43.0	Floor Noise
Hori	34470.000	PK	63.7	43.9	2.1	75.0	34.7	73.9	39.2	Floor Noise
Hori	5725.000	AV	43.2	32.1	3.9	31.8	47.4	53.9	6.5	Integration Method
Hori	11490.000	AV	34.2	39.6	-2.0	33.6	38.2	53.9	15.7	
Hori	17235.000	AV	34.9	42.1	-0.2	32.2	44.6	53.9	9.3	Floor Noise
Hori	22980.000	AV	36.9	37.9	-1.0	31.6	42.2	53.9	11.7	Floor Noise
Hori	28725.000	AV	53.5	43.9	0.2	75.3	22.3	53.9	31.6	Floor Noise
Hori	34470.000	AV	55.1	43.9	2.1	75.0	26.1	53.9	27.8	Floor Noise
Vert	5725.000	PK	68.4	32.1	3.9	31.8	72.6	73.9	1.3	
Vert	11490.000	PK	44.0	39.6	-2.0	33.6	48.0	73.9	25.9	
Vert	17235.000	PK	44.1	42.1	-0.2	32.2	53.8	73.9	20.1	Floor Noise
Vert	22980.000	PK	45.1	37.9	-1.0	31.6	50.4	73.9	23.5	Floor Noise
Vert	28725.000	PK	63.2	43.9	0.2	75.3	32.0	73.9	41.9	Floor Noise
Vert	34470.000	PK	63.3	43.9	2.1	75.0	34.3	73.9	39.6	Floor Noise
Vert	5725.000	AV	43.8	32.1	3.9	31.8	48.0	53.9	5.9	Integration Method
Vert	11490.000	AV	33.9	39.6	-2.0	33.6	37.9	53.9	16.0	
Vert	17235.000	AV	35.0	42.1	-0.2	32.2	44.7	53.9	9.2	Floor Noise
Vert	22980.000	AV	36.8	37.9	-1.0	31.6	42.1	53.9	11.8	Floor Noise
Vert	28725.000	AV	54.9	43.9	0.2	75.3	23.7	53.9	30.2	Floor Noise
Vert	34470.000	AV	55.1	43.9	2.1	75.0	26.1	53.9	27.8	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/23/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH
Engineer	Takafumi Noguchi (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)
Mode	11n-20 Tx 5785MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11570.000	PK	42.8	39.6	-1.9	33.6	46.9	73.9	27.0	
Hori	17355.000	PK	41.2	43.0	-0.2	32.2	51.8	73.9	22.1	Floor Noise
Hori	23140.000	PK	44.7	37.9	-1.0	31.5	50.1	73.9	23.8	Floor Noise
Hori	28925.000	PK	60.5	44.0	0.2	74.6	30.1	73.9	43.8	Floor Noise
Hori	34710.000	PK	63.8	43.8	2.2	75.1	34.7	73.9	39.2	Floor Noise
Hori	11570.000	AV	34.2	39.6	-1.9	33.6	38.3	53.9	15.6	
Hori	17355.000	AV	34.6	43.0	-0.2	32.2	45.2	53.9	8.7	Floor Noise
Hori	23140.000	AV	36.6	37.9	-1.0	31.5	42.0	53.9	11.9	Floor Noise
Hori	28925.000	AV	51.5	44.0	0.2	74.6	21.1	53.9	32.8	Floor Noise
Hori	34710.000	AV	54.9	43.8	2.2	75.1	25.8	53.9	28.1	Floor Noise
Vert	11570.000	PK	43.4	39.6	-1.9	33.6	47.5	73.9	26.4	
Vert	17355.000	PK	44.2	43.0	-0.2	32.2	54.8	73.9	19.1	Floor Noise
Vert	23140.000	PK	44.8	37.9	-1.0	31.5	50.2	73.9	23.7	Floor Noise
Vert	28925.000	PK	61.1	44.0	0.2	74.6	30.7	73.9	43.2	Floor Noise
Vert	34710.000	PK	63.7	43.8	2.2	75.1	34.6	73.9	39.3	Floor Noise
Vert	11570.000	AV	34.4	39.6	-1.9	33.6	38.5	53.9	15.4	
Vert	17355.000	AV	34.7	43.0	-0.2	32.2	45.3	53.9	8.6	Floor Noise
Vert	23140.000	AV	36.7	37.9	-1.0	31.5	42.1	53.9	11.8	Floor Noise
Vert	28925.000	AV	52.1	44.0	0.2	74.6	21.7	53.9	32.2	Floor Noise
Vert	34710.000	AV	54.7	43.8	2.2	75.1	25.6	53.9	28.3	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	20 deg. C / 32% RH	22 deg. C / 37% RH
Engineer	Tomoki Matsui (1-10GHz)	Takafumi Noguchi (10-18GHz)	Takafumi Noguchi (18-40GHz)
Mode	11n-20 Tx 5825MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5850.000	PK	62.9	32.2	4.0	31.8	67.3	73.9	6.6	
Hori	11650.000	PK	45.4	39.6	-1.9	33.5	49.6	73.9	24.3	
Hori	17475.000	PK	44.5	44.0	-0.3	32.2	56.0	73.9	17.9	Floor Noise
Hori	23300.000	PK	44.7	37.9	-1.0	31.4	50.2	73.9	23.7	Floor Noise
Hori	29125.000	PK	58.2	44.0	0.3	74.3	28.2	73.9	45.7	Floor Noise
Hori	34950.000	PK	62.4	43.8	2.2	75.2	33.2	73.9	40.7	Floor Noise
Hori	5850.000	AV	44.6	32.2	4.0	31.8	49.0	53.9	4.9	
Hori	11650.000	AV	35.4	39.6	-1.9	33.5	39.6	53.9	14.3	
Hori	17475.000	AV	34.5	44.0	-0.3	32.2	46.0	53.9	7.9	Floor Noise
Hori	23300.000	AV	37.2	37.9	-1.0	31.4	42.7	53.9	11.2	Floor Noise
Hori	29125.000	AV	49.6	44.0	0.3	74.3	19.6	53.9	34.3	Floor Noise
Hori	34950.000	AV	54.5	43.8	2.2	75.2	25.3	53.9	28.6	Floor Noise
Vert	5850.000	PK	64.5	32.2	4.0	31.8	68.9	73.9	5.0	
Vert	11650.000	PK	45.3	39.6	-1.9	33.5	49.5	73.9	24.4	
Vert	17475.000	PK	43.2	44.0	-0.3	32.2	54.7	73.9	19.2	Floor Noise
Vert	23300.000	PK	45.7	37.9	-1.0	31.4	51.2	73.9	22.7	Floor Noise
Vert	29125.000	PK	60.8	44.0	0.3	74.3	30.8	73.9	43.1	Floor Noise
Vert	34950.000	PK	62.6	43.8	2.2	75.2	33.4	73.9	40.5	Floor Noise
Vert	5850.000	AV	48.9	32.2	4.0	31.8	53.3	53.9	0.6	
Vert	11650.000	AV	35.8	39.6	-1.9	33.5	40.0	53.9	13.9	
Vert	17475.000	AV	41.5	44.0	-0.3	32.2	53.0	53.9	0.9	Floor Noise
Vert	23300.000	AV	37.0	37.9	-1.0	31.4	42.5	53.9	11.4	Floor Noise
Vert	29125.000	AV	51.7	44.0	0.3	74.3	21.7	53.9	32.2	Floor Noise
Vert	34950.000	AV	54.5	43.8	2.2	75.2	25.3	53.9	28.6	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11ac-20 Tx 5180MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	57.9	31.3	3.7	31.7	-	61.2	73.9	12.7	
Hori	5150.000	AV	42.2	31.3	3.7	31.7	0.4	45.9	53.9	8.0	*1)
Vert	5150.000	PK	57.7	31.3	3.7	31.7	-	61.0	73.9	12.9	
Vert	5150.000	AV	39.9	31.3	3.7	31.7	0.4	43.6	53.9	10.3	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11ac-20 Tx 5320MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	64.1	31.6	3.8	31.7	-	67.8	73.9	6.1	
Hori	5350.000	AV	46.9	31.6	3.8	31.7	0.4	51.0	53.9	2.9	*1)
Vert	5350.000	PK	65.7	31.6	3.8	31.7	-	69.4	73.9	4.5	
Vert	5350.000	AV	49.0	31.6	3.8	31.7	0.4	53.1	53.9	0.8	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11ac-20 Tx 5500MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5470.000	PK	61.7	31.8	3.8	31.8	-	65.5	73.9	8.4	
Hori	5470.000	AV	45.5	31.8	3.8	31.8	0.4	49.7	53.9	4.2	*1)
Vert	5470.000	PK	63.5	31.8	3.8	31.8	-	67.3	73.9	6.6	
Vert	5470.000	AV	47.6	31.8	3.8	31.8	0.4	51.8	53.9	2.1	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11ac-20 Tx 5700MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	63.9	32.1	3.9	31.8	-	68.1	73.9	5.8	
Hori	5725.000	AV	46.3	32.1	3.9	31.8	0.4	50.9	53.9	3.0	*1)
Vert	5725.000	PK	63.5	32.1	3.9	31.8	-	67.7	73.9	6.2	
Vert	5725.000	AV	47.4	32.1	3.9	31.8	0.4	52.0	53.9	1.9	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11ac-20 Tx 5745MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	65.5	32.1	3.9	31.8	-	69.7	73.9	4.2	
Hori	5725.000	AV	42.6	32.1	3.9	31.8	0.4	47.2	53.9	6.7	Integration Method, *1)
Vert	5725.000	PK	66.9	32.1	3.9	31.8	-	71.1	73.9	2.8	
Vert	5725.000	AV	43.2	32.1	3.9	31.8	0.4	47.8	53.9	6.1	Integration Method, *1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11ac-20 Tx 5825MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5850.000	PK	59.0	32.2	4.0	31.8	-	63.4	73.9	10.5	
Hori	5850.000	AV	42.9	32.2	4.0	31.8	0.4	47.7	53.9	6.2	*1)
Vert	5850.000	PK	62.2	32.2	4.0	31.8	-	66.6	73.9	7.3	
Vert	5850.000	AV	45.0	32.2	4.0	31.8	0.4	49.8	53.9	4.1	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11n-40 Tx 5190MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	59.8	31.3	3.7	31.7	-	63.1	73.9	10.8	
Hori	5150.000	AV	47.0	31.3	3.7	31.7	0.7	51.0	53.9	2.9	*1)
Vert	5150.000	PK	61.3	31.3	3.7	31.7	-	64.6	73.9	9.3	
Vert	5150.000	AV	47.3	31.3	3.7	31.7	0.7	51.3	53.9	2.6	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11n-40 Tx 5310MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	59.9	31.6	3.8	31.7	-	63.6	68.2	4.6	
Hori	5350.000	AV	43.8	31.6	3.8	31.7	0.7	48.2	53.9	5.7	*1)
Vert	5350.000	PK	61.5	31.6	3.8	31.7	-	65.2	68.2	3.0	
Vert	5350.000	AV	44.5	31.6	3.8	31.7	0.7	48.9	53.9	5.0	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11n-40 Tx 5510MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5470.000	PK	61.6	31.8	3.8	31.8	-	65.4	73.9	8.5	
Hori	5470.000	AV	46.1	31.8	3.8	31.8	0.7	50.6	53.9	3.3	*1)
Vert	5470.000	PK	61.6	31.8	3.8	31.8	-	65.4	73.9	8.5	
Vert	5470.000	AV	47.3	31.8	3.8	31.8	0.7	51.8	53.9	2.1	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11n-40 Tx 5670MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	53.5	32.1	3.9	31.8	-	57.7	73.9	16.2	
Hori	5725.000	AV	38.8	32.1	3.9	31.8	0.7	43.7	53.9	10.2	*1)
Vert	5725.000	PK	52.4	32.1	3.9	31.8	-	56.6	73.9	17.3	
Vert	5725.000	AV	40.1	32.1	3.9	31.8	0.7	45.0	53.9	8.9	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11n-40 Tx 5755MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	56.6	32.1	3.9	31.8	-	60.8	73.9	13.1	
Hori	5725.000	AV	41.4	32.1	3.9	31.8	0.7	46.3	53.9	7.6	*1)
Vert	5725.000	PK	58.8	32.1	3.9	31.8	-	63.0	73.9	10.9	
Vert	5725.000	AV	44.0	32.1	3.9	31.8	0.7	48.9	53.9	5.0	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10662332H
Date	01/22/2015
Temperature/ Humidity	22 deg. C / 33% RH
Engineer	Tomoki Matsui
	(1-10GHz)
Mode	11n-40 Tx 5795MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5850.000	PK	46.9	32.2	4.0	31.8	-	51.3	73.9	22.6	
Hori	5850.000	AV	35.4	32.2	4.0	31.8	0.7	40.5	53.9	13.4	*1)
Vert	5850.000	PK	51.3	32.2	4.0	31.8	-	55.7	73.9	18.2	
Vert	5850.000	AV	36.9	32.2	4.0	31.8	0.7	42.0	53.9	11.9	*1)

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (10-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-40 Tx 5190MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	61.1	31.3	3.7	31.7	-	64.4	73.9	9.5	
Hori	10380.000	PK	49.2	38.8	-2.3	33.6	-	52.1	73.9	21.8	
Hori	15570.000	PK	44.1	39.0	-0.9	32.1	-	50.1	73.9	23.8	Floor Noise
Hori	20760.000	PK	47.6	37.6	-1.8	32.3	-	51.1	73.9	22.8	Floor Noise
Hori	5150.000	AV	47.8	31.3	3.7	31.7	0.6	51.7	53.9	2.2	*1)
Hori	10380.000	AV	40.7	38.8	-2.3	33.6	0.6	44.2	53.9	9.7	
Hori	15570.000	AV	35.7	39.0	-0.9	32.1	-	41.7	53.9	12.2	Floor Noise
Hori	20760.000	AV	38.1	37.6	-1.8	32.3	-	41.6	53.9	12.3	Floor Noise
Vert	5150.000	PK	62.7	31.3	3.7	31.7	-	66.0	73.9	7.9	
Vert	10380.000	PK	50.1	38.8	-2.3	33.6	-	53.0	73.9	20.9	
Vert	15570.000	PK	44.5	39.0	-0.9	32.1	-	50.5	73.9	23.4	Floor Noise
Vert	20760.000	PK	45.7	37.6	-1.8	32.3	-	49.2	73.9	24.7	Floor Noise
Vert	5150.000	AV	46.5	31.3	3.7	31.7	0.6	50.4	53.9	3.5	*1)
Vert	10380.000	AV	40.8	38.8	-2.3	33.6	0.6	44.3	53.9	9.6	
Vert	15570.000	AV	35.2	39.0	-0.9	32.1	-	41.2	53.9	12.7	Floor Noise
Vert	20760.000	AV	36.9	37.6	-1.8	32.3	-	40.4	53.9	13.5	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/25/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Takafumi Noguchi (1-10GHz)	Koji Yamamoto (10-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-40 Tx 5270MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	10540.000	PK	46.5	38.7	-2.3	33.6	-	49.3	73.9	24.6	
Hori	15810.000	PK	43.8	38.3	-0.8	32.2	-	49.1	73.9	24.8	Floor Noise
Hori	21080.000	PK	45.4	37.6	-1.7	32.3	-	49.0	73.9	24.9	Floor Noise
Hori	10540.000	AV	37.5	38.7	-2.3	33.6	0.6	40.9	53.9	13.0	*1)
Hori	15810.000	AV	35.6	38.3	-0.8	32.2	-	40.9	53.9	13.0	Floor Noise
Hori	21080.000	AV	36.8	37.6	-1.7	32.3	-	40.4	53.9	13.5	Floor Noise
Vert	10540.000	PK	47.4	38.7	-2.3	33.6	-	50.2	73.9	23.7	
Vert	15810.000	PK	44.3	38.3	-0.8	32.2	-	49.6	73.9	24.3	Floor Noise
Vert	21080.000	PK	44.4	37.6	-1.7	32.3	-	48.0	73.9	25.9	Floor Noise
Vert	10540.000	AV	38.9	38.7	-2.3	33.6	0.6	42.3	53.9	11.6	*1)
Vert	15810.000	AV	35.5	38.3	-0.8	32.2	-	40.8	53.9	13.1	Floor Noise
Vert	21080.000	AV	35.5	37.6	-1.7	32.3	-	39.1	53.9	14.8	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (10-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-40 Tx 5310MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	59.6	31.6	3.8	31.7	-	63.3	73.9	10.6	
Hori	10620.000	PK	45.6	38.7	-2.2	33.7	-	48.4	73.9	25.5	
Hori	15930.000	PK	44.0	37.9	-0.7	32.3	-	48.9	73.9	25.0	Floor Noise
Hori	21240.000	PK	44.9	37.6	-1.7	32.3	-	48.5	73.9	25.4	Floor Noise
Hori	5350.000	AV	44.1	31.6	3.8	31.7	0.6	48.4	53.9	5.5	*1)
Hori	10620.000	AV	36.8	38.7	-2.2	33.7	0.6	40.2	53.9	13.7	
Hori	15930.000	AV	35.2	37.9	-0.7	32.3	-	40.1	53.9	13.8	Floor Noise
Hori	21240.000	AV	36.0	37.6	-1.7	32.3	-	39.6	53.9	14.3	Floor Noise
Vert	5350.000	PK	60.2	31.6	3.8	31.7	-	63.9	73.9	10.0	
Vert	10620.000	PK	47.6	38.7	-2.2	33.7	-	50.4	73.9	23.5	
Vert	15930.000	PK	43.9	37.9	-0.7	32.3	-	48.8	73.9	25.1	Floor Noise
Vert	21240.000	PK	44.3	37.6	-1.7	32.3	-	47.9	73.9	26.0	Floor Noise
Vert	5350.000	AV	45.5	31.6	3.8	31.7	0.6	49.8	53.9	4.1	*1)
Vert	10620.000	AV	39.1	38.7	-2.2	33.7	0.6	42.5	53.9	11.4	
Vert	15930.000	AV	35.1	37.9	-0.7	32.3	-	40.0	53.9	13.9	Floor Noise
Vert	21240.000	AV	35.8	37.6	-1.7	32.3	-	39.4	53.9	14.5	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (10-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-40 Tx 5510MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5470.000	PK	61.8	31.8	3.8	31.8	-	65.6	73.9	8.3	
Hori	11020.000	PK	43.5	38.8	-2.0	33.7	-	46.6	73.9	27.3	Floor Noise
Hori	16530.000	PK	44.3	39.0	-0.5	32.2	-	50.6	73.9	23.3	Floor Noise
Hori	22040.000	PK	45.3	37.6	-1.4	32.1	-	49.4	73.9	24.5	Floor Noise
Hori	5470.000	AV	46.7	31.8	3.8	31.8	0.6	51.1	53.9	2.8	*1)
Hori	11020.000	AV	34.6	38.8	-2.0	33.7	-	37.7	53.9	16.2	Floor Noise
Hori	16530.000	AV	35.5	39.0	-0.5	32.2	-	41.8	53.9	12.1	Floor Noise
Hori	22040.000	AV	36.3	37.6	-1.4	32.1	-	40.4	53.9	13.5	Floor Noise
Vert	5470.000	PK	62.5	31.8	3.8	31.8	-	66.3	73.9	7.6	
Vert	11020.000	PK	44.3	38.8	-2.0	33.7	-	47.4	73.9	26.5	Floor Noise
Vert	16530.000	PK	44.1	39.0	-0.5	32.2	-	50.4	73.9	23.5	Floor Noise
Vert	22040.000	PK	44.9	37.6	-1.4	32.1	-	49.0	73.9	24.9	Floor Noise
Vert	5470.000	AV	49.3	31.8	3.8	31.8	0.6	53.7	53.9	0.2	*1)
Vert	11020.000	AV	35.5	38.8	-2.0	33.7	-	38.6	53.9	15.3	Floor Noise
Vert	16530.000	AV	35.8	39.0	-0.5	32.2	-	42.1	53.9	11.8	Floor Noise
Vert	22040.000	AV	36.1	37.6	-1.4	32.1	-	40.2	53.9	13.7	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/25/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Takafumi Noguchi (1-10GHz)	Koji Yamamoto (10-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-40 Tx 5550MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11100.000	PK	42.9	38.9	-1.9	33.7	46.2	73.9	27.7	Floor Noise
Hori	16650.000	PK	43.7	39.3	-0.5	32.2	50.3	73.9	23.6	Floor Noise
Hori	22200.000	PK	45.8	37.6	-1.3	32.0	50.1	73.9	23.8	Floor Noise
Hori	11100.000	AV	34.6	38.9	-1.9	33.7	37.9	53.9	16.0	Floor Noise
Hori	16650.000	AV	35.0	39.3	-0.5	32.2	41.6	53.9	12.3	Floor Noise
Hori	22200.000	AV	36.8	37.6	-1.3	32.0	41.1	53.9	12.8	Floor Noise
Vert	11100.000	PK	43.7	38.9	-1.9	33.7	47.0	73.9	26.9	Floor Noise
Vert	16650.000	PK	44.2	39.3	-0.5	32.2	50.8	73.9	23.1	Floor Noise
Vert	22200.000	PK	44.6	37.6	-1.3	32.0	48.9	73.9	25.0	Floor Noise
Vert	11100.000	AV	34.9	38.9	-1.9	33.7	38.2	53.9	15.7	Floor Noise
Vert	16650.000	AV	35.1	39.3	-0.5	32.2	41.7	53.9	12.2	Floor Noise
Vert	22200.000	AV	36.5	37.6	-1.3	32.0	40.8	53.9	13.1	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui	Koji Yamamoto	Koji Yamamoto
	(1-10GHz)	(10-26.5GHz)	(26.5-40GHz)
Mode	11ac-40 Tx 5670MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	53.2	32.1	3.9	31.8	-	57.4	73.9	16.5	
Hori	11340.000	PK	42.1	39.3	-2.0	33.6	-	45.8	73.9	28.1	Floor Noise
Hori	17010.000	PK	43.9	40.2	-0.3	32.2	-	51.6	73.9	22.3	Floor Noise
Hori	22680.000	PK	45.5	37.8	-1.1	31.7	-	50.5	73.9	23.4	Floor Noise
Hori	5725.000	AV	40.8	32.1	3.9	31.8	0.6	45.6	53.9	8.3	*1)
Hori	11340.000	AV	33.8	39.3	-2.0	33.6	-	37.5	53.9	16.4	Floor Noise
Hori	17010.000	AV	34.8	40.2	-0.3	32.2	-	42.5	53.9	11.4	Floor Noise
Hori	22680.000	AV	36.1	37.8	-1.1	31.7	-	41.1	53.9	12.8	Floor Noise
Vert	5725.000	PK	54.4	32.1	3.9	31.8	-	58.6	73.9	15.3	
Vert	11340.000	PK	41.5	39.3	-2.0	33.6	-	45.2	73.9	28.7	Floor Noise
Vert	17010.000	PK	43.6	40.2	-0.3	32.2	-	51.3	73.9	22.6	Floor Noise
Vert	22680.000	PK	43.8	37.8	-1.1	31.7	-	48.8	73.9	25.1	Floor Noise
Vert	5725.000	AV	41.5	32.1	3.9	31.8	0.6	46.3	53.9	7.6	*1)
Vert	11340.000	AV	33.3	39.3	-2.0	33.6	-	37.0	53.9	16.9	Floor Noise
Vert	17010.000	AV	35.3	40.2	-0.3	32.2	-	43.0	53.9	10.9	Floor Noise
Vert	22680.000	AV	36.2	37.8	-1.1	31.7	-	41.2	53.9	12.7	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (10-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-40 Tx 5755MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	56.4	32.1	3.9	31.8	-	60.6	73.9	13.3	
Hori	11510.000	PK	42.0	39.6	-2.0	33.6	-	46.0	73.9	27.9	Floor Noise
Hori	17265.000	PK	44.1	42.3	-0.2	32.2	-	54.0	73.9	19.9	Floor Noise
Hori	23020.000	PK	45.5	37.9	-1.0	31.6	-	50.8	73.9	23.1	Floor Noise
Hori	5725.000	AV	40.4	32.1	3.9	31.8	0.6	45.2	53.9	8.7	*1)
Hori	11510.000	AV	33.6	39.6	-2.0	33.6	-	37.6	53.9	16.3	Floor Noise
Hori	17265.000	AV	35.9	42.3	-0.2	32.2	-	45.8	53.9	8.1	Floor Noise
Hori	23020.000	AV	37.1	37.9	-1.0	31.6	-	42.4	53.9	11.5	Floor Noise
Vert	5725.000	PK	58.1	32.1	3.9	31.8	-	62.3	73.9	11.6	
Vert	11510.000	PK	42.6	39.6	-2.0	33.6	-	46.6	73.9	27.3	Floor Noise
Vert	17265.000	PK	43.9	42.3	-0.2	32.2	-	53.8	73.9	20.1	Floor Noise
Vert	23020.000	PK	45.3	37.9	-1.0	31.6	-	50.6	73.9	23.3	Floor Noise
Vert	5725.000	AV	42.9	32.1	3.9	31.8	0.6	47.7	53.9	6.2	*1)
Vert	11510.000	AV	33.7	39.6	-2.0	33.6	-	37.7	53.9	16.2	Floor Noise
Vert	17265.000	AV	35.1	42.3	-0.2	32.2	-	45.0	53.9	8.9	Floor Noise
Vert	23020.000	AV	36.8	37.9	-1.0	31.6	-	42.1	53.9	11.8	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (10-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-40 Tx 5795MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5850.000	PK	49.1	32.2	4.0	31.8	-	53.5	73.9	20.4	
Hori	11590.000	PK	41.6	39.6	-1.9	33.5	-	45.8	73.9	28.1	Floor Noise
Hori	17385.000	PK	43.5	43.3	-0.2	32.2	-	54.4	73.9	19.5	Floor Noise
Hori	23180.000	PK	45.3	37.9	-1.0	31.5	-	50.7	73.9	23.2	Floor Noise
Hori	5850.000	AV	37.1	32.2	4.0	31.8	0.6	42.1	53.9	11.8	*1)
Hori	11590.000	AV	34.0	39.6	-1.9	33.5	-	38.2	53.9	15.7	Floor Noise
Hori	17385.000	AV	35.4	43.3	-0.2	32.2	-	46.3	53.9	7.6	Floor Noise
Hori	23180.000	AV	36.8	37.9	-1.0	31.5	-	42.2	53.9	11.7	Floor Noise
Vert	5850.000	PK	51.2	32.2	4.0	31.8	-	55.6	73.9	18.3	
Vert	11590.000	PK	41.9	39.6	-1.9	33.5	-	46.1	73.9	27.8	Floor Noise
Vert	17385.000	PK	43.8	43.3	-0.2	32.2	-	54.7	73.9	19.2	Floor Noise
Vert	23180.000	PK	45.7	37.9	-1.0	31.5	-	51.1	73.9	22.8	Floor Noise
Vert	5850.000	AV	38.4	32.2	4.0	31.8	0.6	43.4	53.9	10.5	*1)
Vert	11590.000	AV	33.8	39.6	-1.9	33.5	-	38.0	53.9	15.9	Floor Noise
Vert	17385.000	AV	35.2	43.3	-0.2	32.2	-	46.1	53.9	7.8	Floor Noise
Vert	23180.000	AV	36.6	37.9	-1.0	31.5	-	42.0	53.9	11.9	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

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Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (18-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-80 Tx 5210MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	62.6	31.3	3.7	31.7	-	65.9	73.9	8.0	
Hori	10420.000	PK	44.8	38.8	-2.3	33.6	-	47.7	73.9	26.2	
Hori	15630.000	PK	43.4	38.8	-0.9	32.1	-	49.2	73.9	24.7	Floor Noise
Hori	20840.000	PK	46.2	37.6	-1.8	32.3	-	49.7	73.9	24.2	Floor Noise
Hori	5150.000	AV	48.3	31.3	3.7	31.7	0.2	51.8	53.9	2.1	*1)
Hori	10420.000	AV	36.2	38.8	-2.3	33.6	0.2	39.3	53.9	14.6	
Hori	15630.000	AV	33.6	38.8	-0.9	32.1	-	39.4	53.9	14.5	Floor Noise
Hori	20840.000	AV	37.8	37.6	-1.8	32.3	-	41.3	53.9	12.6	Floor Noise
Vert	5150.000	PK	63.0	31.3	3.7	31.7	-	66.3	73.9	7.6	
Vert	10420.000	PK	44.8	38.8	-2.3	33.6	-	47.7	73.9	26.2	
Vert	15630.000	PK	44.5	38.8	-0.9	32.1	-	50.3	73.9	23.6	Floor Noise
Vert	20840.000	PK	46.0	37.6	-1.8	32.3	-	49.5	73.9	24.4	Floor Noise
Vert	5150.000	AV	48.9	31.3	3.7	31.7	0.2	52.4	53.9	1.5	Integration Method, *1)
Vert	10420.000	AV	37.6	38.8	-2.3	33.6	0.2	40.7	53.9	13.2	
Vert	15630.000	AV	34.7	38.8	-0.9	32.1	-	40.5	53.9	13.4	Floor Noise
Vert	20840.000	AV	37.2	37.6	-1.8	32.3	-	40.7	53.9	13.2	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (18-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-80 Tx 5290MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	63.6	31.6	3.8	31.7	-	67.3	73.9	6.6	
Hori	10580.000	PK	44.5	38.7	-2.3	33.6	-	47.3	73.9	26.6	
Hori	15870.000	PK	43.6	38.1	-0.8	32.3	-	48.6	73.9	25.3	Floor Noise
Hori	21160.000	PK	44.6	37.6	-1.7	32.3	-	48.2	73.9	25.7	Floor Noise
Hori	5350.000	AV	47.7	31.6	3.8	31.7	0.2	51.6	53.9	2.3	*1)
Hori	10580.000	AV	35.9	38.7	-2.3	33.6	0.2	38.9	53.9	15.0	
Hori	15870.000	AV	34.5	38.1	-0.8	32.3	-	39.5	53.9	14.4	Floor Noise
Hori	21160.000	AV	36.8	37.6	-1.7	32.3	-	40.4	53.9	13.5	Floor Noise
Vert	5350.000	PK	63.5	31.6	3.8	31.7	-	67.2	73.9	6.7	
Vert	10580.000	PK	45.1	38.7	-2.3	33.6	-	47.9	73.9	26.0	
Vert	15870.000	PK	42.7	38.1	-0.8	32.3	-	47.7	73.9	26.2	Floor Noise
Vert	21160.000	PK	44.7	37.6	-1.7	32.3	-	48.3	73.9	25.6	Floor Noise
Vert	5350.000	AV	46.7	31.6	3.8	31.7	0.2	50.6	53.9	3.3	*1)
Vert	10580.000	AV	36.7	38.7	-2.3	33.6	0.2	39.7	53.9	14.2	
Vert	15870.000	AV	34.8	38.1	-0.8	32.3	-	39.8	53.9	14.1	Floor Noise
Vert	21160.000	AV	36.3	37.6	-1.7	32.3	-	39.9	53.9	14.0	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB
*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (18-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-80 Tx 5530MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5470.000	PK	62.4	31.8	3.8	31.8	-	66.2	73.9	7.7	
Hori	11060.000	PK	43.4	38.9	-1.9	33.7	-	46.7	73.9	27.2	Floor Noise
Hori	16590.000	PK	43.9	39.2	-0.5	32.2	-	50.4	73.9	23.5	Floor Noise
Hori	22120.000	PK	44.9	37.6	-1.4	32.0	-	49.1	73.9	24.8	Floor Noise
Hori	5470.000	AV	47.6	31.8	3.8	31.8	0.2	51.6	53.9	2.3	*1)
Hori	11060.000	AV	33.8	38.9	-1.9	33.7	-	37.1	53.9	16.8	Floor Noise
Hori	16590.000	AV	34.2	39.2	-0.5	32.2	-	40.7	53.9	13.2	Floor Noise
Hori	22120.000	AV	36.3	37.6	-1.4	32.0	-	40.5	53.9	13.4	Floor Noise
Vert	5470.000	PK	64.7	31.8	3.8	31.8	-	68.5	73.9	5.4	
Vert	11060.000	PK	45.5	38.9	-1.9	33.7	-	48.8	73.9	25.1	Floor Noise
Vert	16590.000	PK	44.2	39.2	-0.5	32.2	-	50.7	73.9	23.2	Floor Noise
Vert	22120.000	PK	44.3	37.6	-1.4	32.0	-	48.5	73.9	25.4	Floor Noise
Vert	5470.000	AV	49.0	31.8	3.8	31.8	0.2	53.0	53.9	0.9	*1)
Vert	11060.000	AV	35.2	38.9	-1.9	33.7	-	38.5	53.9	15.4	Floor Noise
Vert	16590.000	AV	34.8	39.2	-0.5	32.2	-	41.3	53.9	12.6	Floor Noise
Vert	22120.000	AV	36.1	37.6	-1.4	32.0	-	40.3	53.9	13.6	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui	Koji Yamamoto	Koji Yamamoto
	(1-10GHz)	(18-26.5GHz)	(26.5-40GHz)
Mode	11ac-80 Tx 5610MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	47.1	32.1	3.9	31.8	-	51.3	73.9	22.6	
Hori	11220.000	PK	41.5	39.1	-1.9	33.7	-	45.0	73.9	28.9	Floor Noise
Hori	16830.000	PK	42.8	39.7	-0.3	32.2	-	50.0	73.9	23.9	Floor Noise
Hori	22440.000	PK	45.5	37.7	-1.2	31.9	-	50.1	73.9	23.8	Floor Noise
Hori	5725.000	AV	36.5	32.1	3.9	31.8	0.2	40.9	53.9	13.0	*1)
Hori	11220.000	AV	33.6	39.1	-1.9	33.7	-	37.1	53.9	16.8	Floor Noise
Hori	16830.000	AV	34.0	39.7	-0.3	32.2	-	41.2	53.9	12.7	Floor Noise
Hori	22440.000	AV	37.0	37.7	-1.2	31.9	-	41.6	53.9	12.3	Floor Noise
Vert	5725.000	PK	47.8	32.1	3.9	31.8	-	52.0	73.9	21.9	
Vert	11220.000	PK	44.4	39.1	-1.9	33.7	-	47.9	73.9	26.0	Floor Noise
Vert	16830.000	PK	42.6	39.7	-0.3	32.2	-	49.8	73.9	24.1	Floor Noise
Vert	22440.000	PK	45.1	37.7	-1.2	31.9	-	49.7	73.9	24.2	Floor Noise
Vert	5725.000	AV	37.2	32.1	3.9	31.8	0.2	41.6	53.9	12.3	*1)
Vert	11220.000	AV	34.4	39.1	-1.9	33.7	-	37.9	53.9	16.0	Floor Noise
Vert	16830.000	AV	34.2	39.7	-0.3	32.2	-	41.4	53.9	12.5	Floor Noise
Vert	22440.000	AV	36.9	37.7	-1.2	31.9	-	41.5	53.9	12.4	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

*1) Not Out of Band emission (Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	10662332H		
Date	01/22/2015	01/26/2015	01/27/2015
Temperature/ Humidity	22 deg. C / 33% RH	23deg. C / 36% RH	25deg. C / 35% RH
Engineer	Tomoki Matsui (1-10GHz)	Koji Yamamoto (18-26.5GHz)	Koji Yamamoto (26.5-40GHz)
Mode	11ac-80 Tx 5775MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	57.3	32.1	3.9	31.8	-	61.5	73.9	12.4	
Hori	5850.000	PK	54.9	32.2	4.0	31.8	-	59.3	73.9	14.6	
Hori	11550.000	PK	41.5	39.6	-2.0	33.6	-	45.5	73.9	28.4	Floor Noise
Hori	17325.000	PK	43.7	42.8	-0.2	32.2	-	54.1	73.9	19.8	Floor Noise
Hori	23100.000	PK	45.4	37.9	-1.0	31.5	-	50.8	73.9	23.1	Floor Noise
Hori	5725.000	AV	40.9	32.1	3.9	31.8	0.2	45.3	53.9	8.6	*1)
Hori	5850.000	AV	39.7	32.2	4.0	31.8	0.2	44.3	53.9	9.6	*1)
Hori	11550.000	AV	32.7	39.6	-2.0	33.6	-	36.7	53.9	17.2	Floor Noise
Hori	17325.000	AV	34.1	42.8	-0.2	32.2	-	44.5	53.9	9.4	Floor Noise
Hori	23100.000	AV	36.5	37.9	-1.0	31.5	-	41.9	53.9	12.0	Floor Noise
Vert	5725.000	PK	60.9	32.1	3.9	31.8	-	65.1	73.9	8.8	
Vert	5850.000	PK	54.7	32.2	4.0	31.8	-	59.1	73.9	14.8	
Vert	11550.000	PK	41.8	39.6	-2.0	33.6	-	45.8	73.9	28.1	Floor Noise
Vert	17325.000	PK	43.4	42.8	-0.2	32.2	-	53.8	73.9	20.1	Floor Noise
Vert	23100.000	PK	44.8	37.9	-1.0	31.5	-	50.2	73.9	23.7	Floor Noise
Vert	5725.000	AV	43.1	32.1	3.9	31.8	0.2	47.5	53.9	6.4	*1)
Vert	5850.000	AV	40.9	32.2	4.0	31.8	0.2	45.5	53.9	8.4	*1)
Vert	11550.000	AV	32.5	39.6	-2.0	33.6	-	36.5	53.9	17.4	Floor Noise
Vert	17325.000	AV	34.5	42.8	-0.2	32.2	-	44.9	53.9	9.0	Floor Noise
Vert	23100.000	AV	36.9	37.9	-1.0	31.5	-	42.3	53.9	11.6	Floor Noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

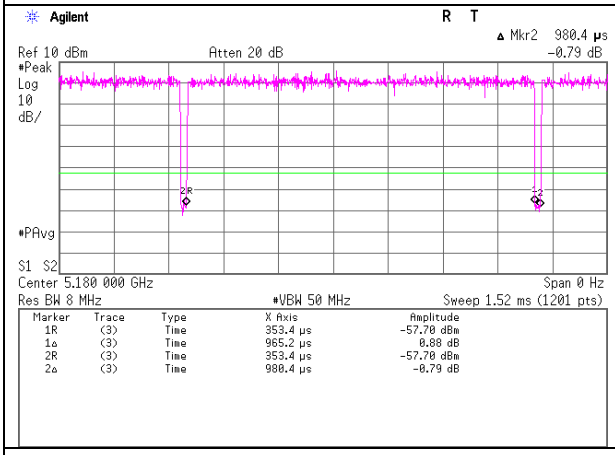
*1) Not Out of Band emission (Leakage Power)

Burst rate confirmation

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10662332H
Date	01/26/2015
Temperature/ Humidity	24 deg. C / 35% RH
Engineer	Takumi Shimada
Mode	11a/n-20/ac-20 Tx

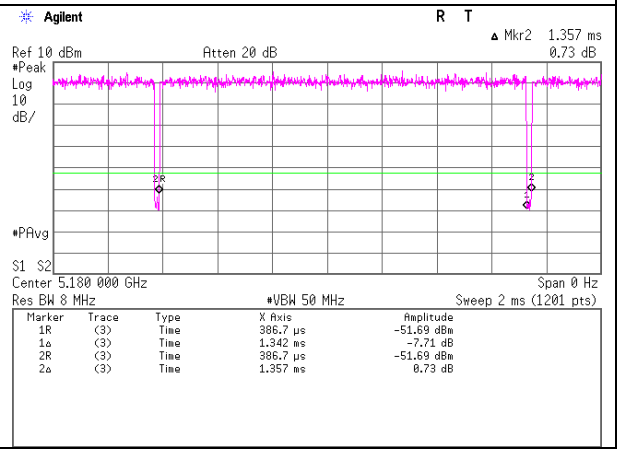
11a 9Mbps

Tx on / (Tx on + Tx off) = 0.984
Tx on / (Tx on + Tx off) * 100 = 98.4 %
Duty factor = 10 * log (980.4 / 965.2) = 0.07 dB



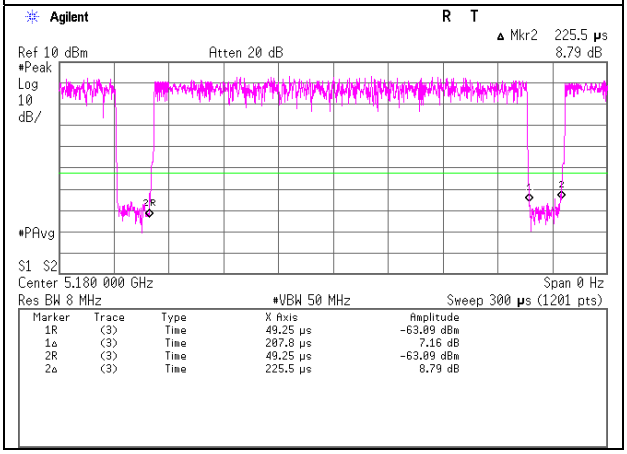
11n-20 MCS0

Tx on / (Tx on + Tx off) = 0.989
Tx on / (Tx on + Tx off) * 100 = 98.9 %
Duty factor = 10 * log (1.357 / 1.342) = 0.05 dB



11ac-20 MCS5

Tx on / (Tx on + Tx off) = 0.922
Tx on / (Tx on + Tx off) * 100 = 92.2 %
Duty factor = 10 * log (225.5 / 207.8) = 0.36 dB



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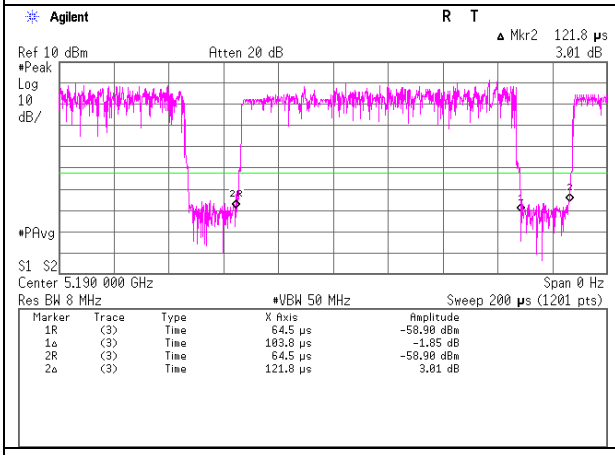
Burst rate confirmation

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10662332H
Date	01/26/2015
Temperature/ Humidity	24 deg. C / 35% RH
Engineer	Takumi Shimada
Mode	11n-40/ac-40/ac-80 Tx

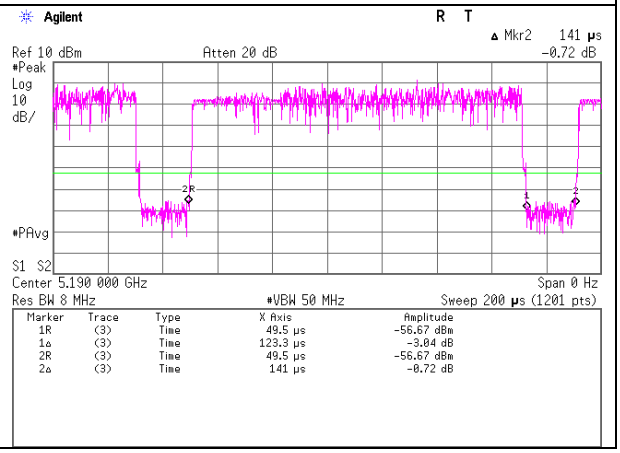
11n-40 MCS7

Tx on / (Tx on + Tx off) = 0.852
Tx on / (Tx on + Tx off) * 100 = 85.2 %
Duty factor = 10 * log (121.8 / 103.8) = 0.69 dB



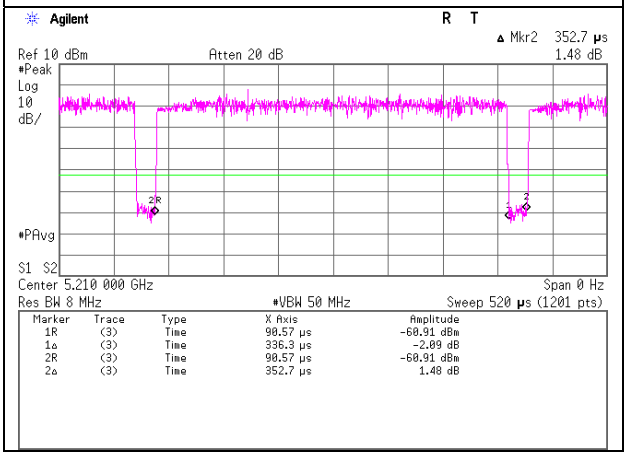
11ac-40 MCS5

Tx on / (Tx on + Tx off) = 0.874
Tx on / (Tx on + Tx off) * 100 = 87.4 %
Duty factor = 10 * log (141 / 123.3) = 0.58 dB



11ac-80 MCS0

Tx on / (Tx on + Tx off) = 0.954
Tx on / (Tx on + Tx off) * 100 = 95.4 %
Duty factor = 10 * log (352.7 / 336.3) = 0.21 dB



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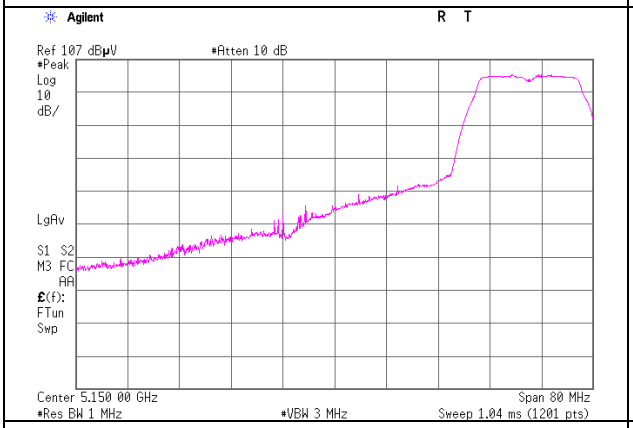
Facsimile : +81 596 24 8124

Band Edge confirmation

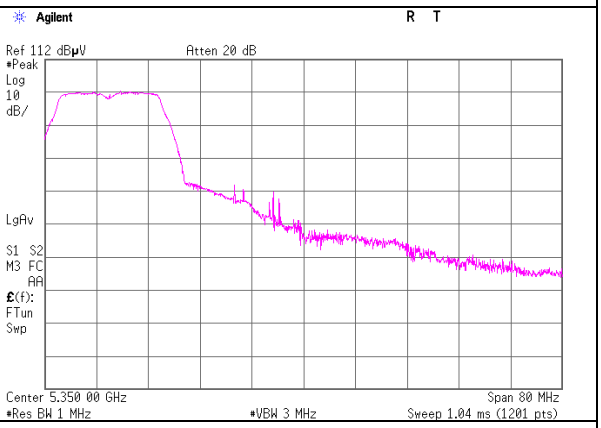
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11a Tx

11a Peak detect

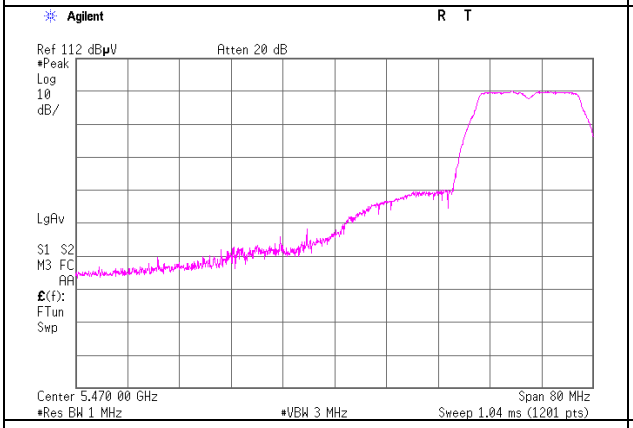
5180 MHz



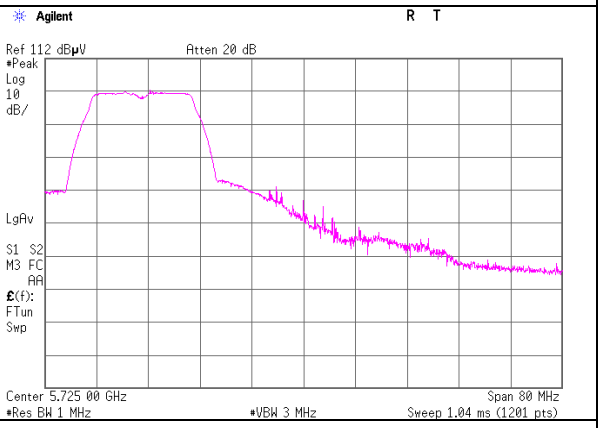
5320 MHz



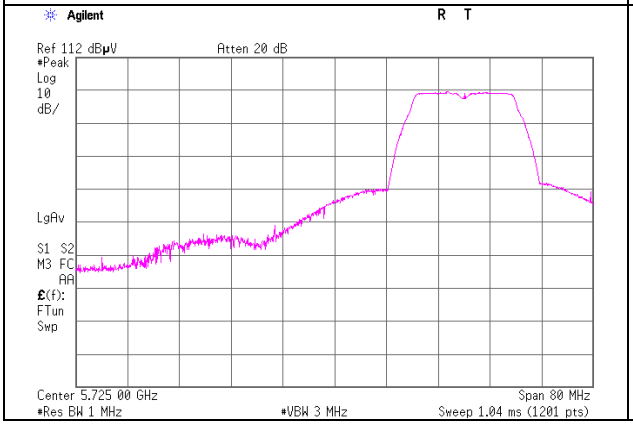
5500 MHz



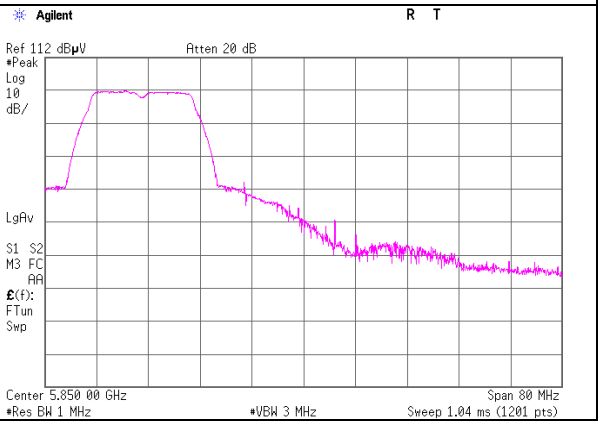
5700 MHz



5745 MHz



5825 MHz



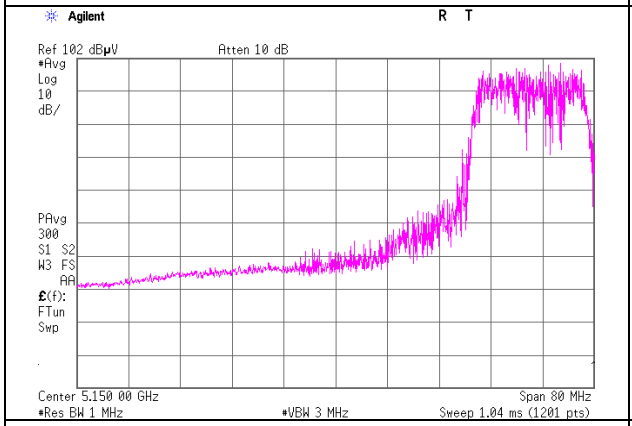
* Final result of band edge was measured as Radiated Spurious Emission. Refer to Radiated Spurious Emission's pages.

Band Edge confirmation

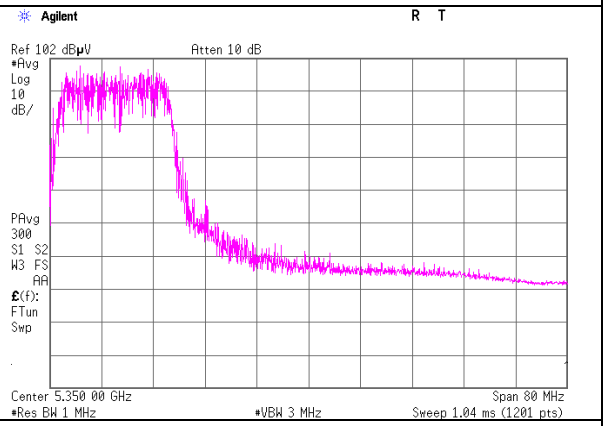
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11a Tx

11a Average detect

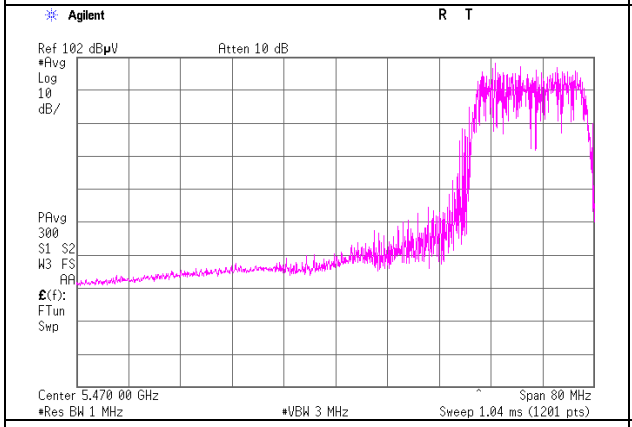
5180 MHz



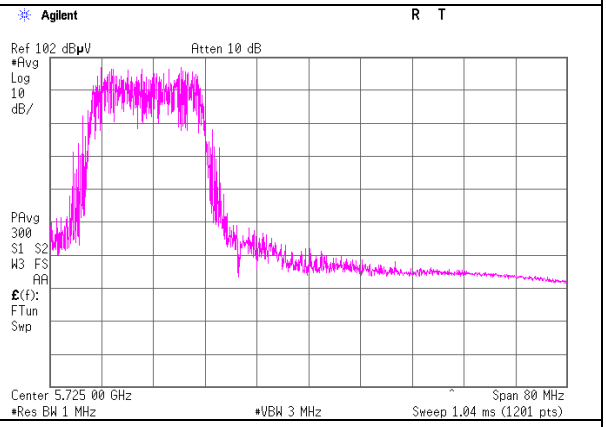
5320 MHz



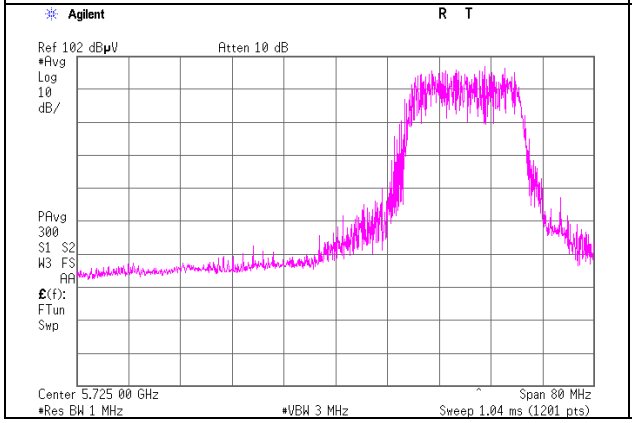
5500 MHz



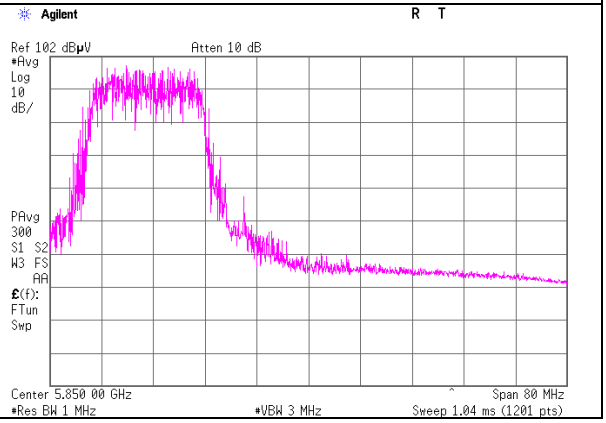
5700 MHz



5745 MHz



5825 MHz



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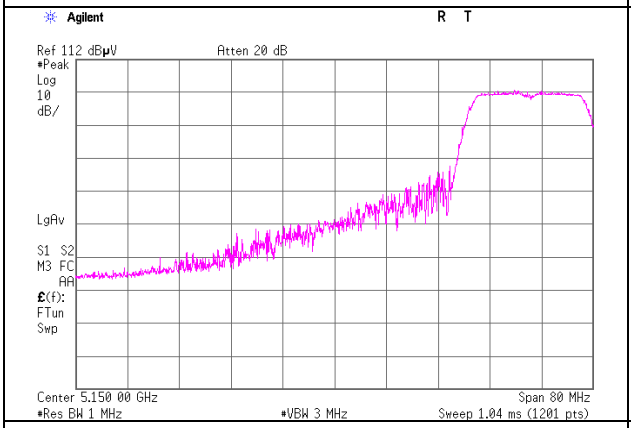
Band Edge confirmation

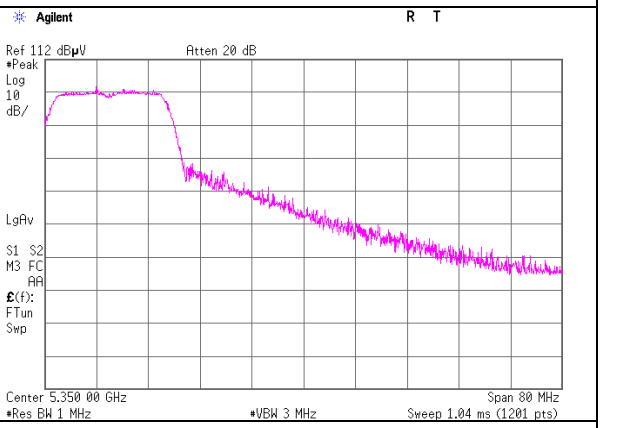
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11n-20 Tx

11n-20 Peak detect

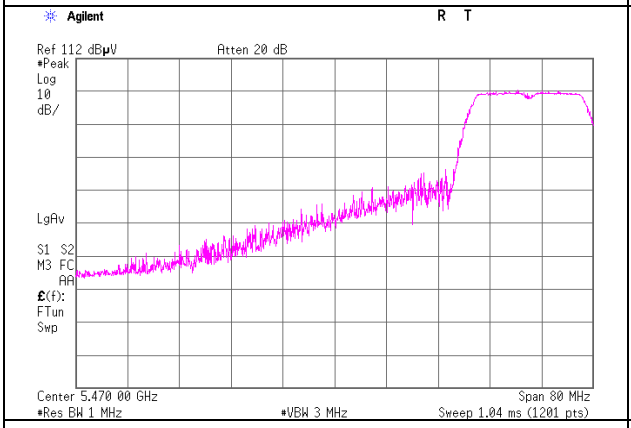
5180 MHz



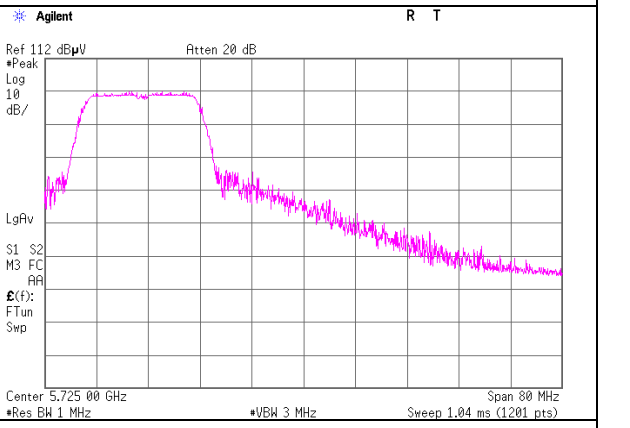
5320 MHz



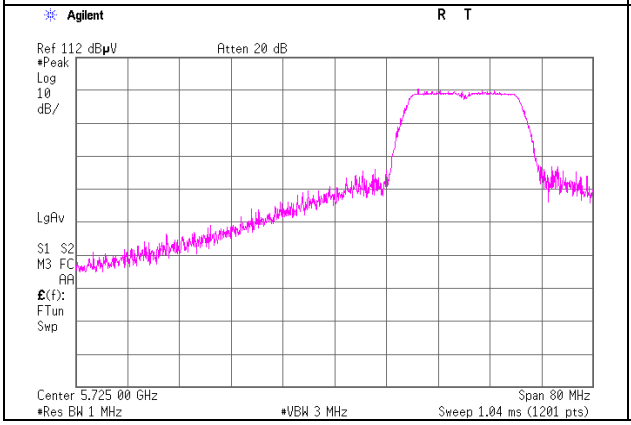
5500 MHz



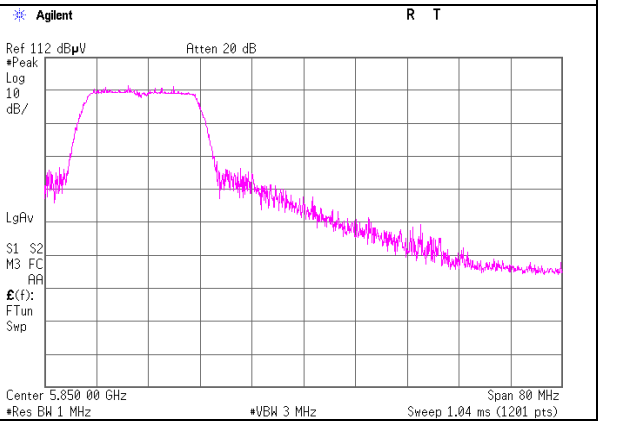
5700 MHz



5745 MHz



5825 MHz



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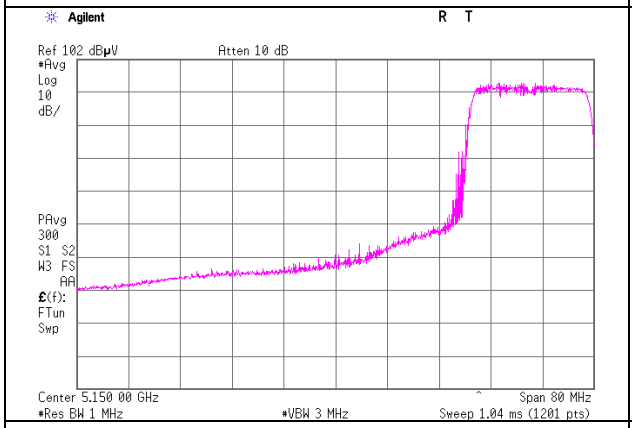
Band Edge confirmation

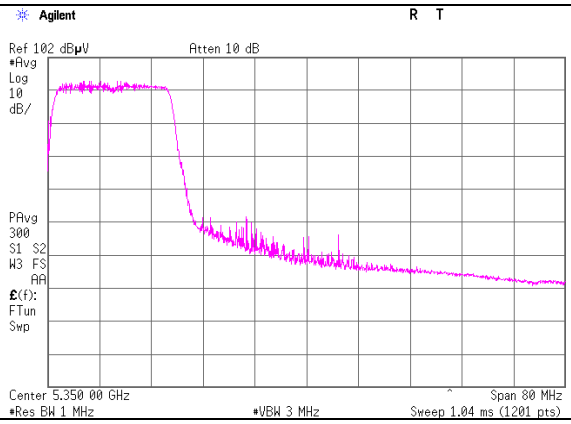
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11n-20 Tx

11n-20 Average detect

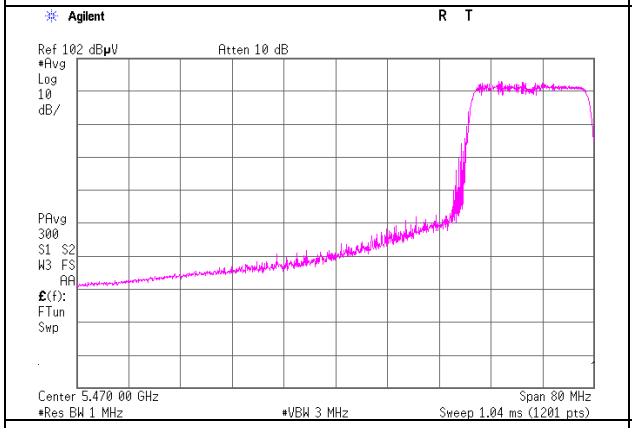
5180 MHz



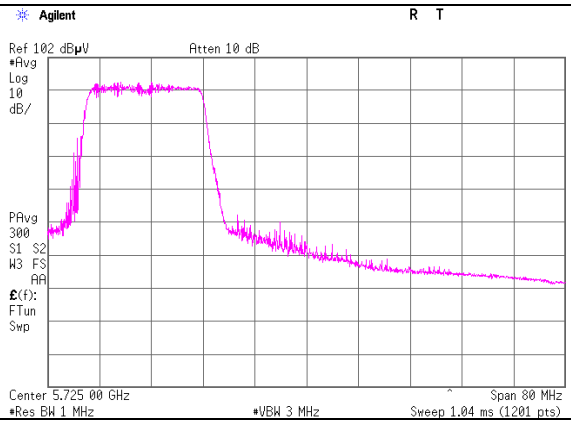
5320 MHz



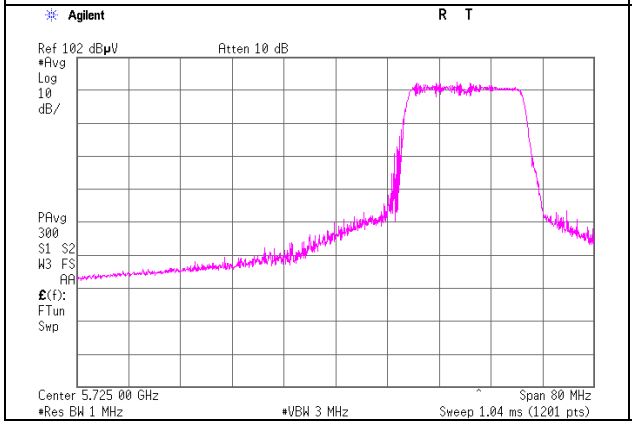
5500 MHz



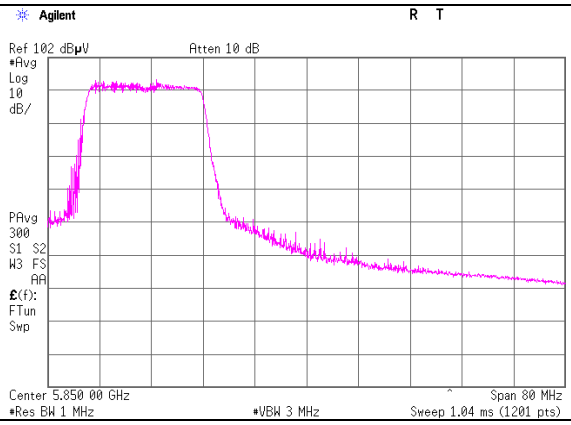
5700 MHz



5745 MHz



5825 MHz



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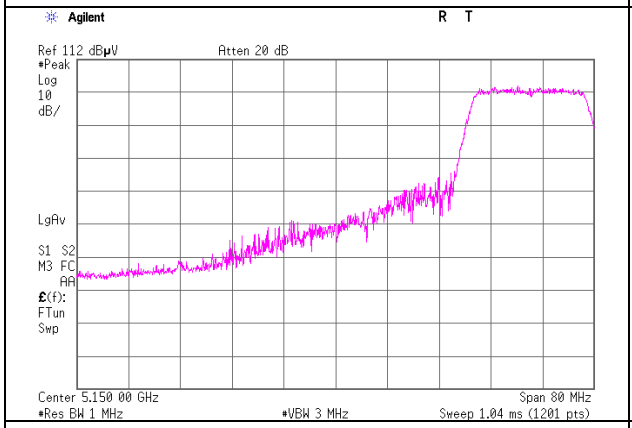
Band Edge confirmation

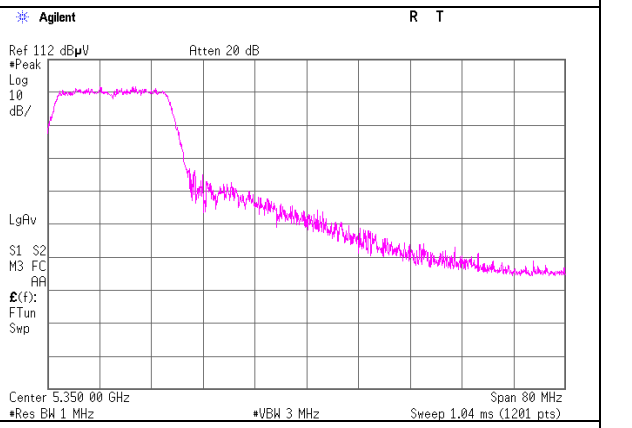
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11ac-20 Tx

11ac-20 Peak detect

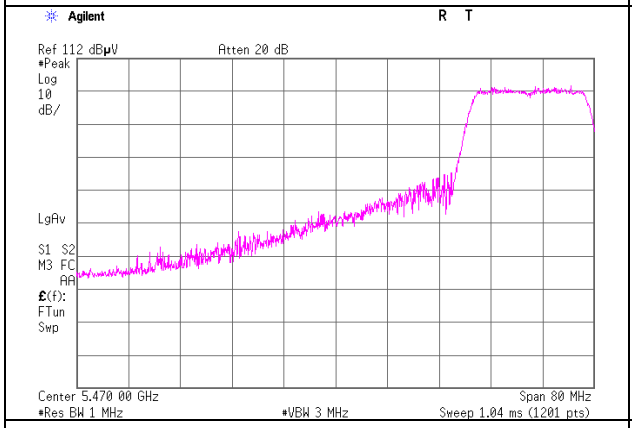
5180 MHz



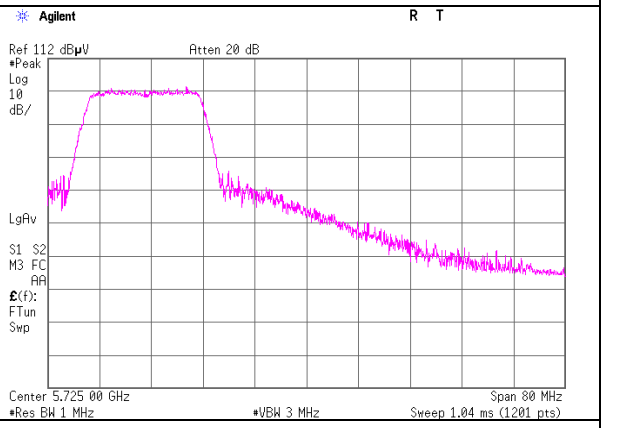
5320 MHz



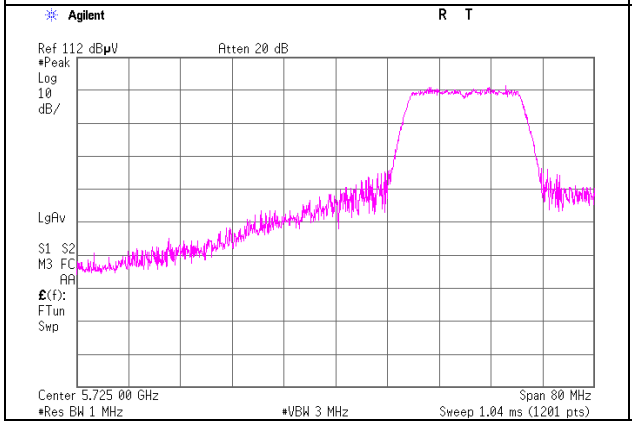
5500 MHz



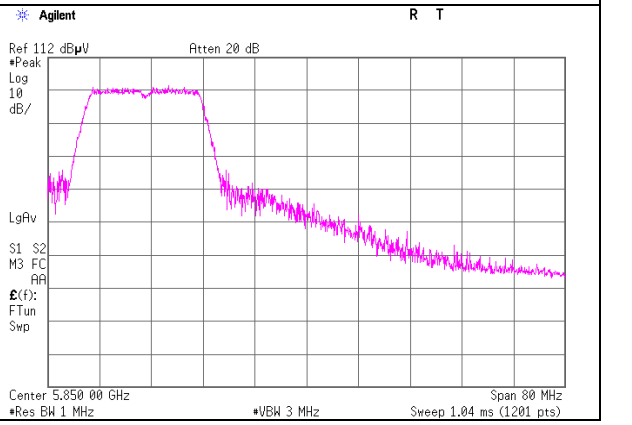
5700 MHz



5745 MHz



5825 MHz



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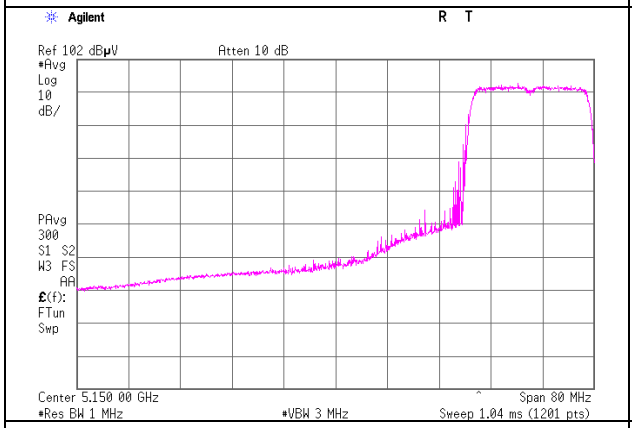
Band Edge confirmation

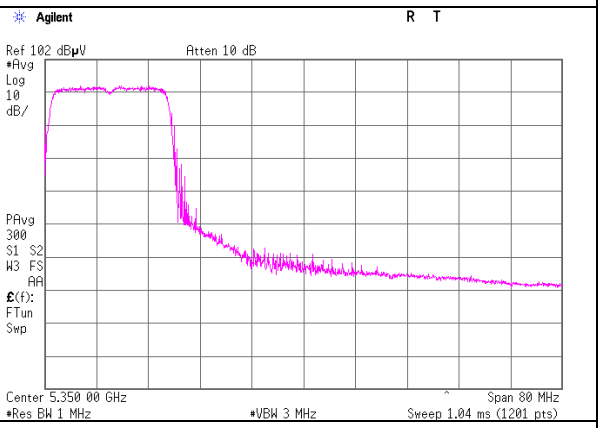
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11ac-20 Tx

11ac-20 Average detect

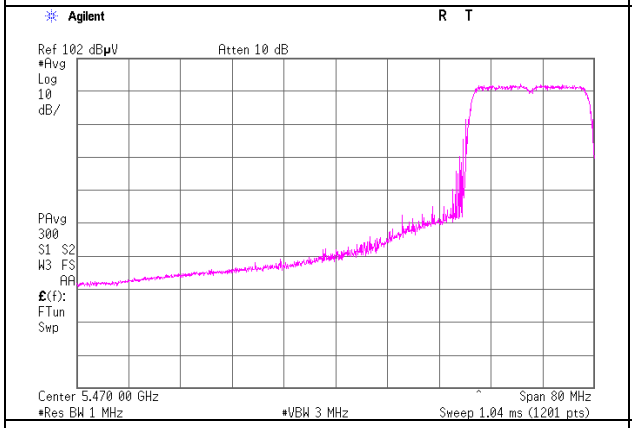
5180 MHz



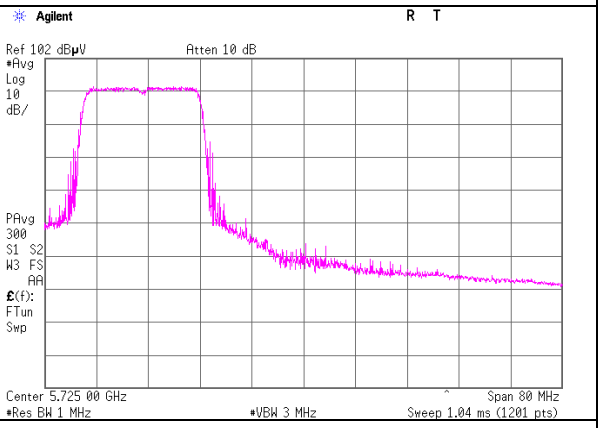
5320 MHz



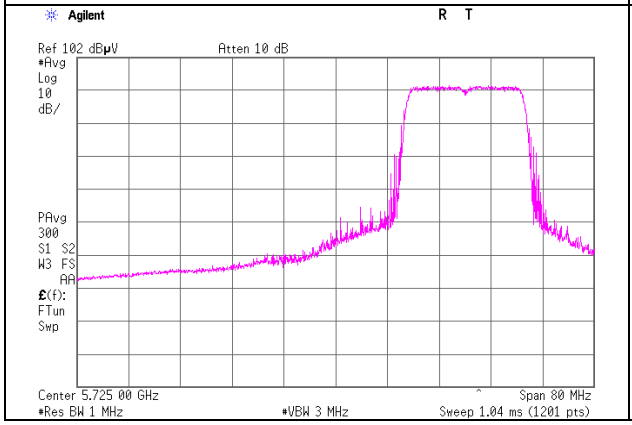
5500 MHz



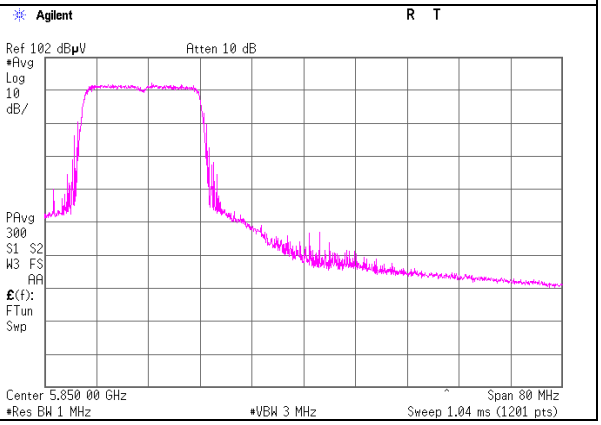
5700 MHz



5745 MHz



5825 MHz



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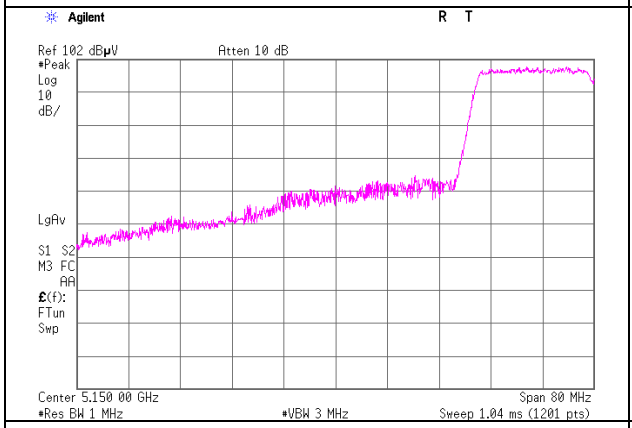
Band Edge confirmation

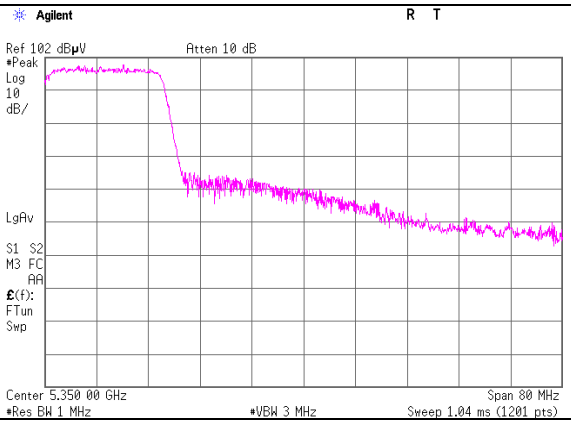
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11n-40 Tx

11n-40 Peak detect

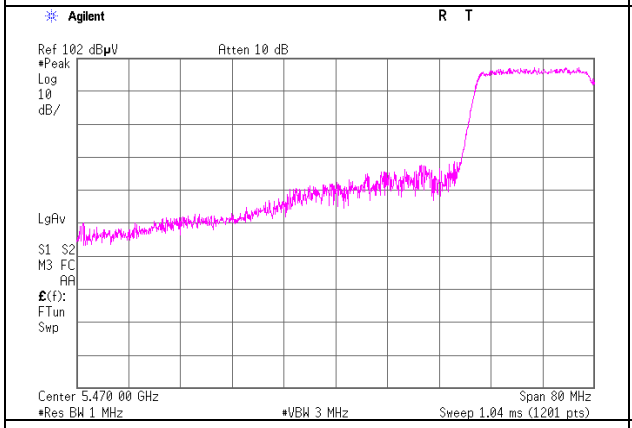
5190 MHz



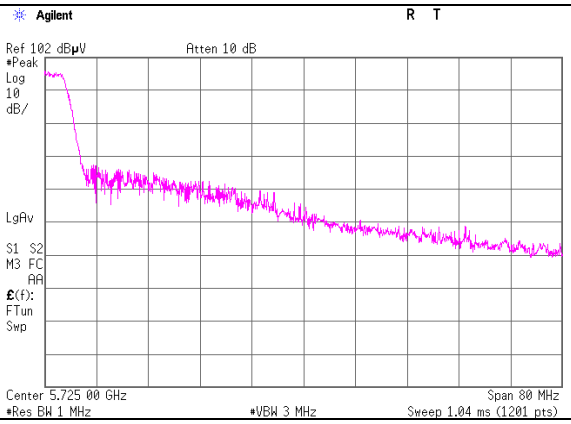
5310 MHz



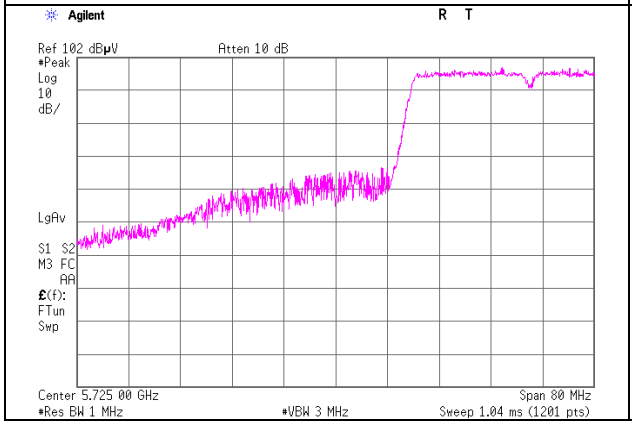
5510 MHz



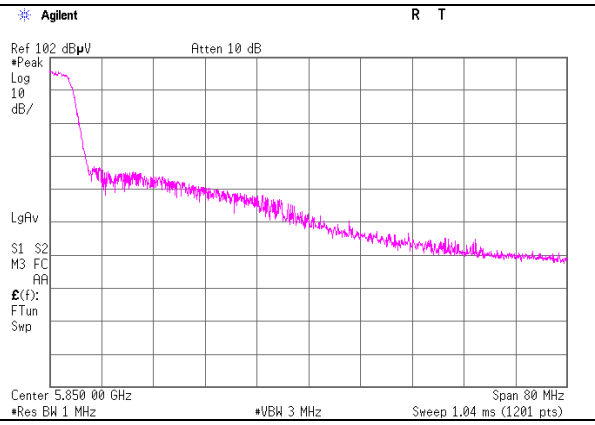
5670 MHz



5755 MHz



5795 MHz



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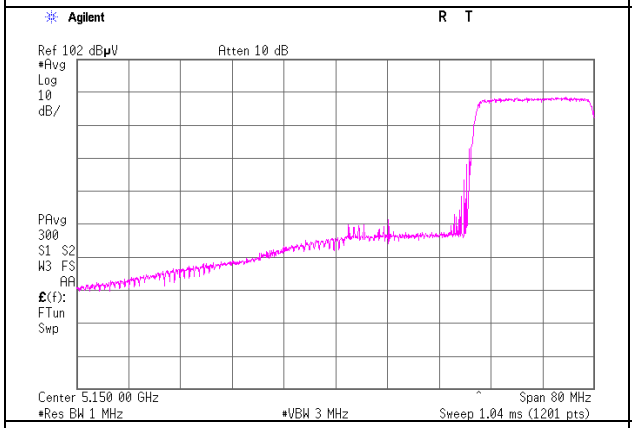
Band Edge confirmation

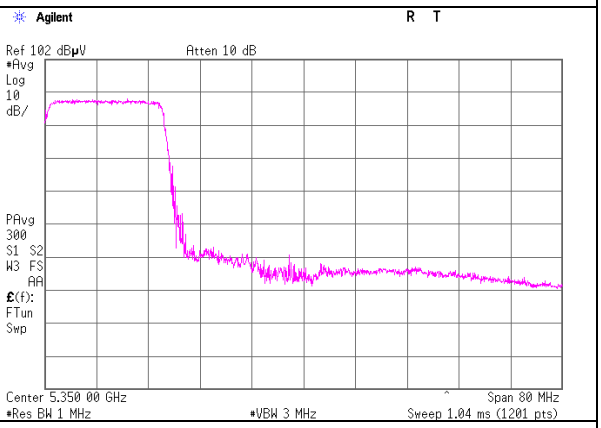
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11n-40 Tx

11n-40 Average detect

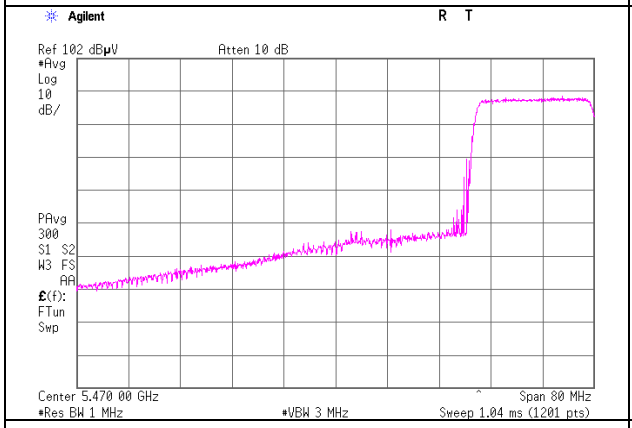
5190 MHz



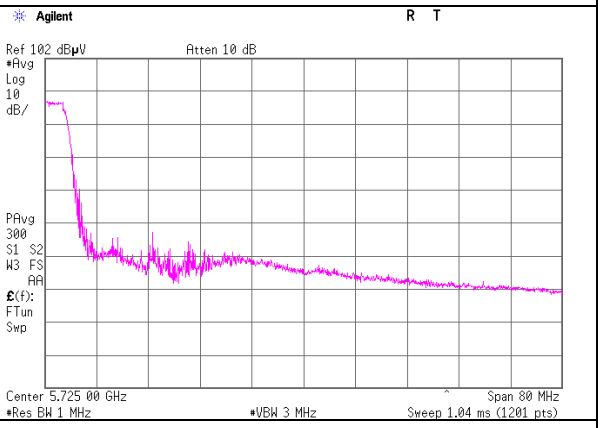
5310 MHz



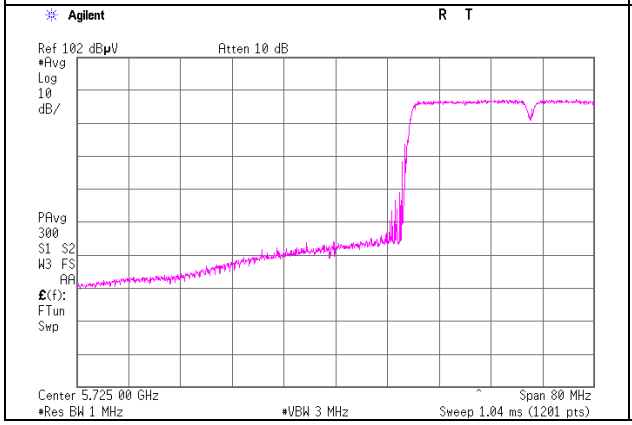
5510 MHz



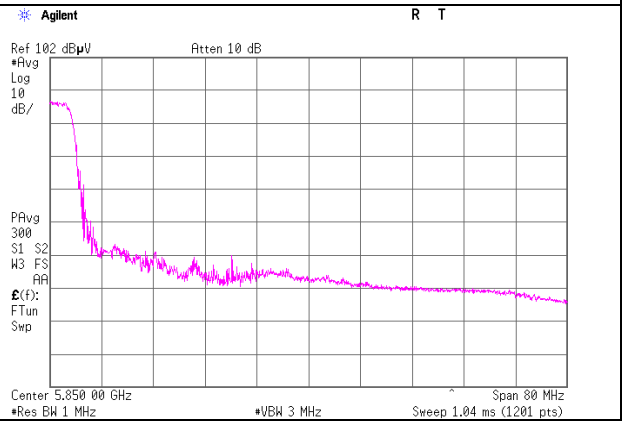
5670 MHz



5755 MHz



5795 MHz



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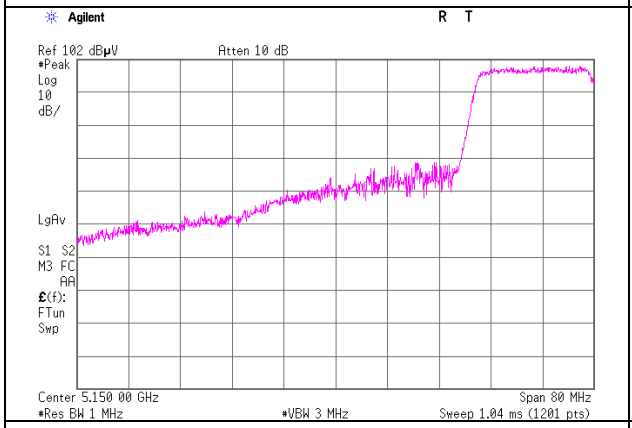
Band Edge confirmation

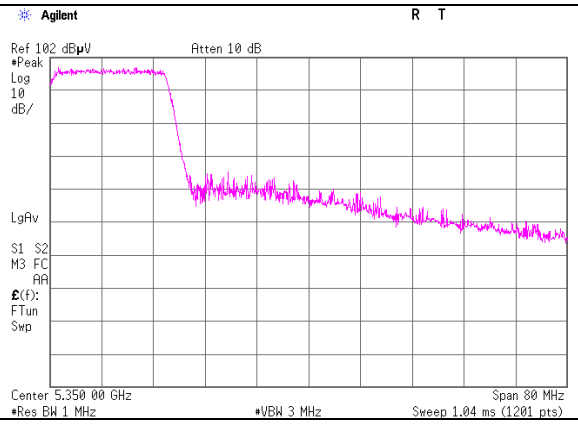
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11ac-40 Tx

11ac-40 Peak detect

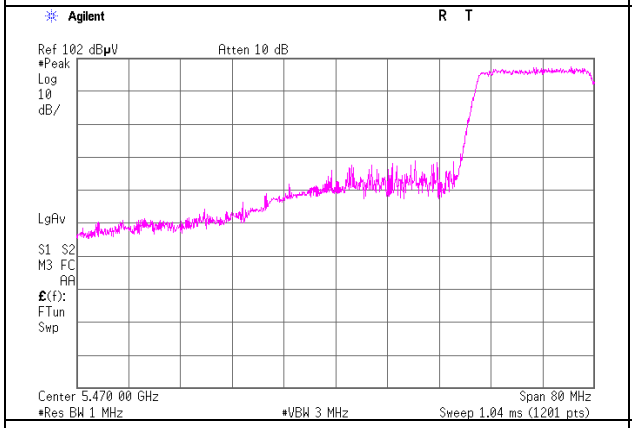
5190 MHz



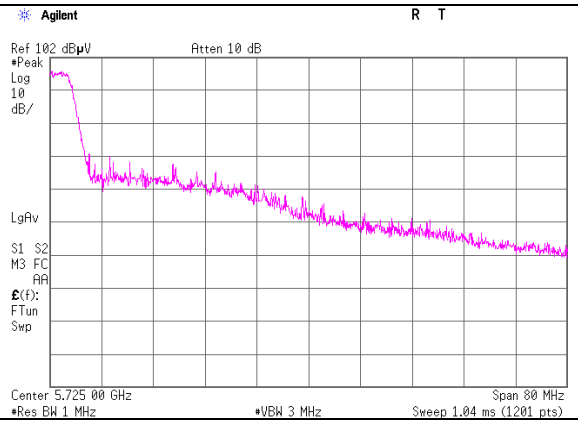
5310 MHz



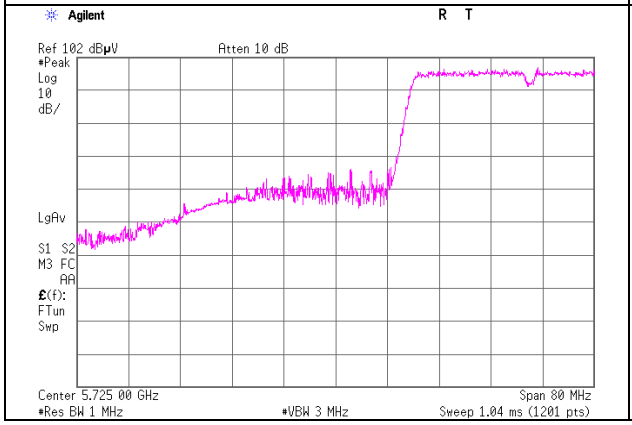
5510 MHz



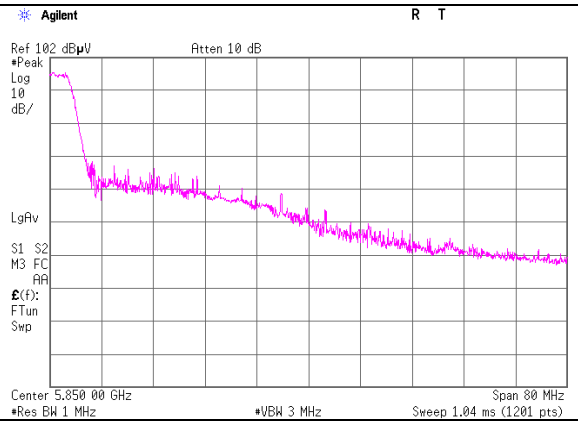
5670 MHz



5755 MHz



5795 MHz



* Final result of band edge was measured as Radiated Spurious Emission. Refer to Radiated Spurious Emission's pages.

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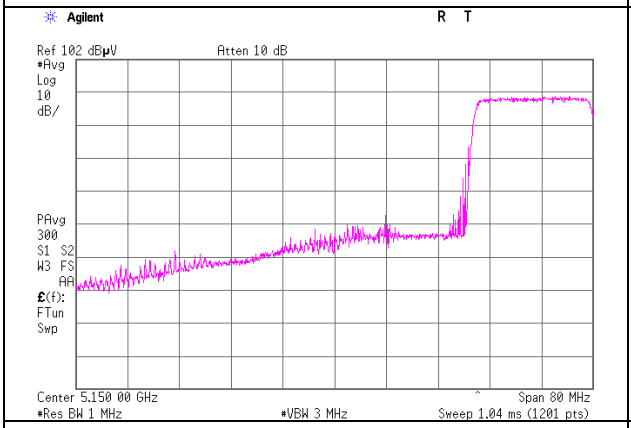
Band Edge confirmation

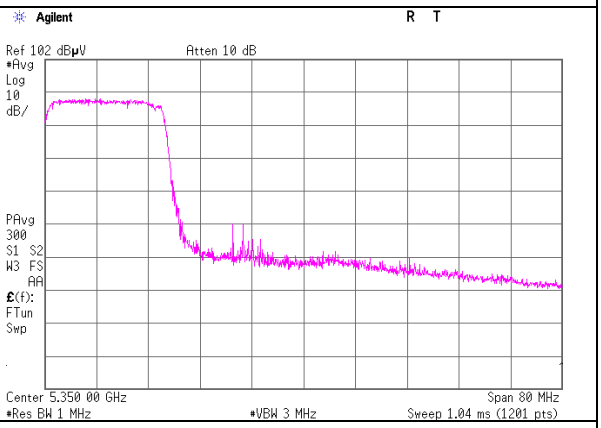
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11ac-40 Tx

11ac-40 Average detect

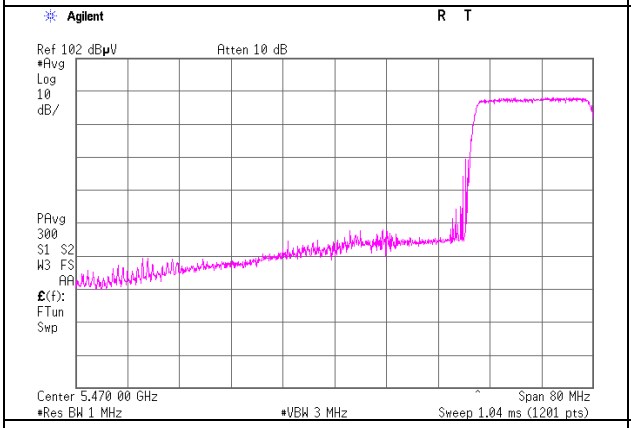
5190 MHz



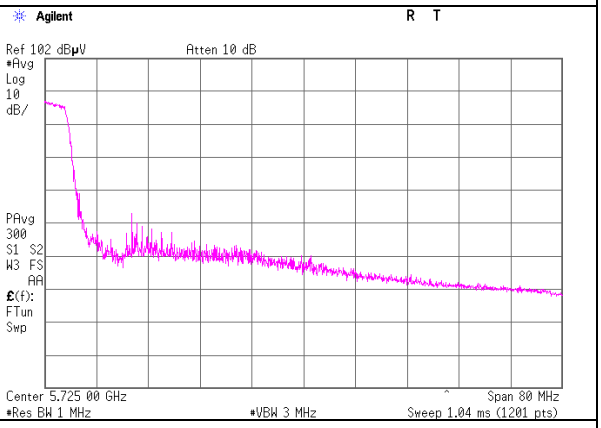
5310 MHz



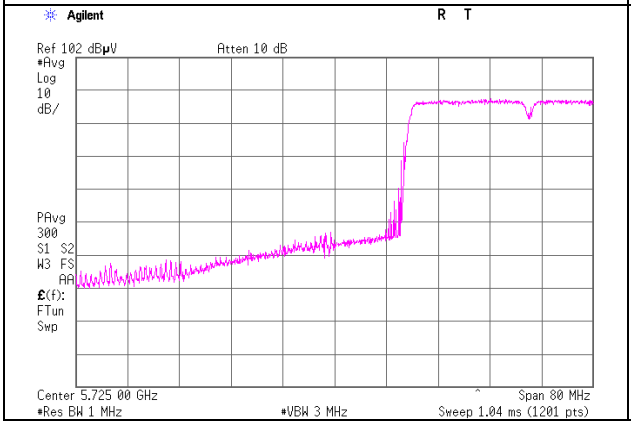
5510 MHz



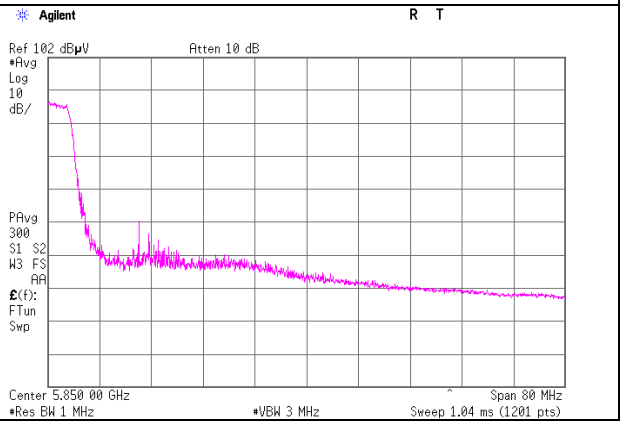
5670 MHz



5755 MHz



5795 MHz



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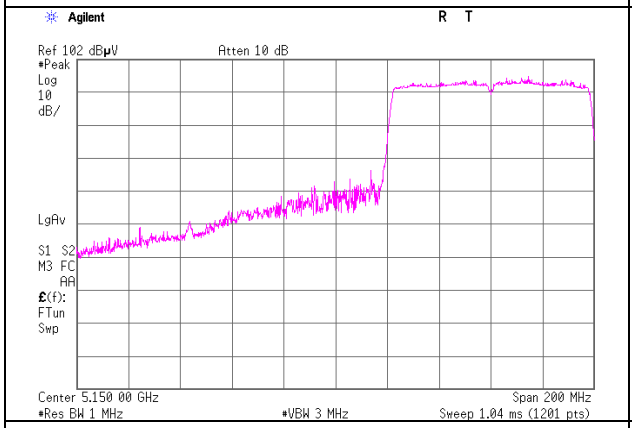
Band Edge confirmation

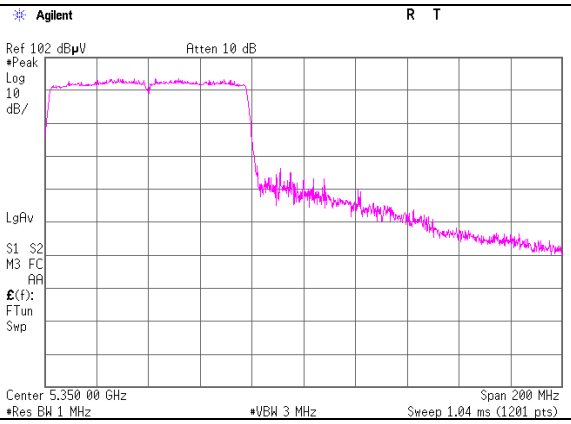
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11ac-80 Tx

11ac-80 Peak detect

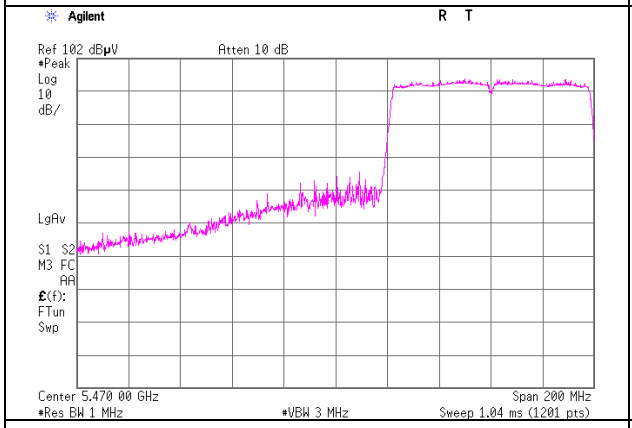
5210 MHz



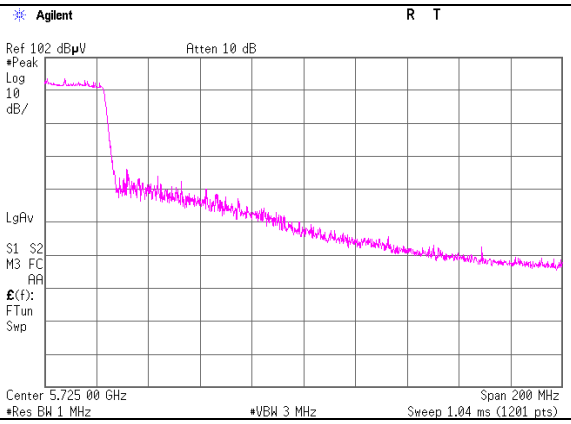
5290 MHz



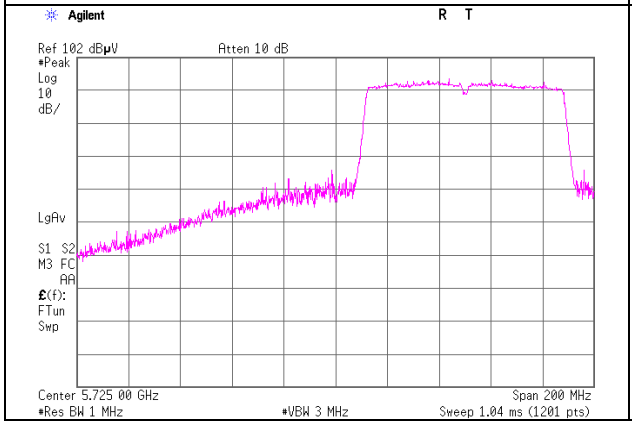
5530 MHz



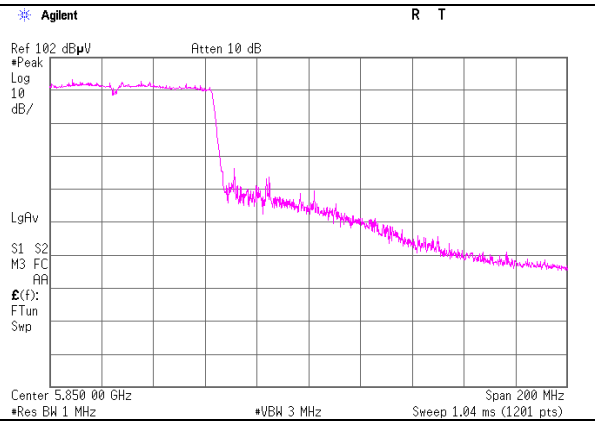
5610 MHz



5775 MHz



5775 MHz



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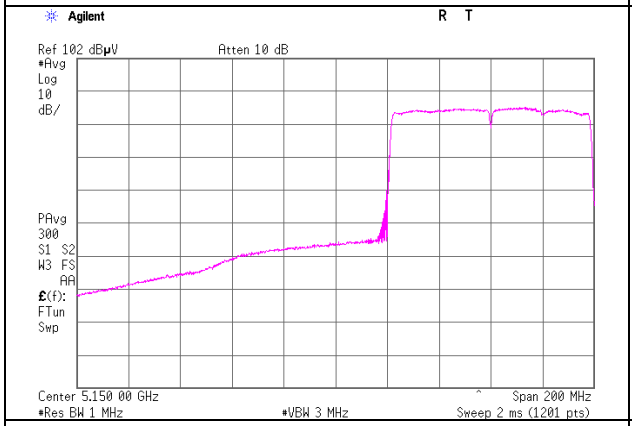
Band Edge confirmation

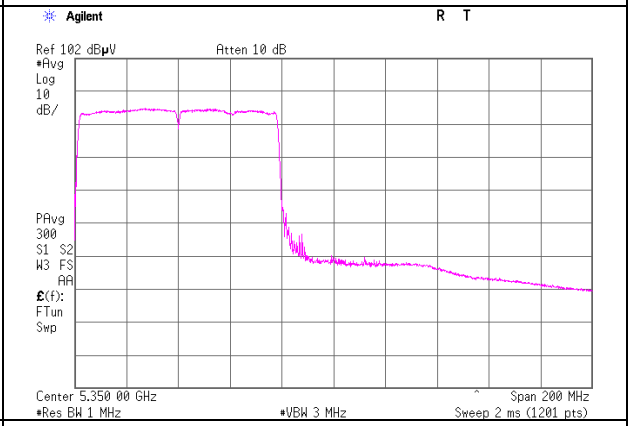
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	10662332H
Date	07/09/2015
Temperature/ Humidity	24 deg. C / 67% RH
Engineer	Keisuke Kawamura
Mode	11ac-80 Tx

11ac-80 Average detect

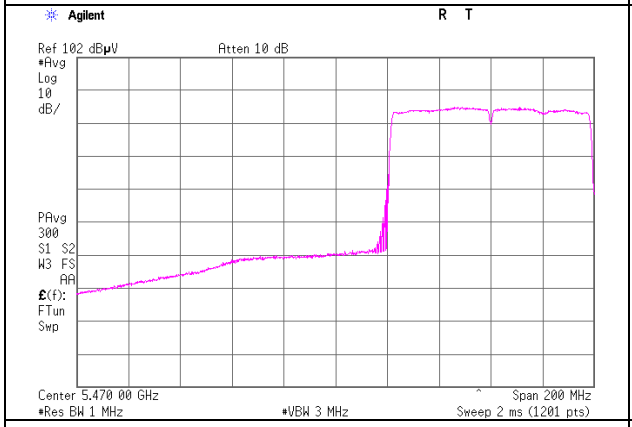
5210 MHz



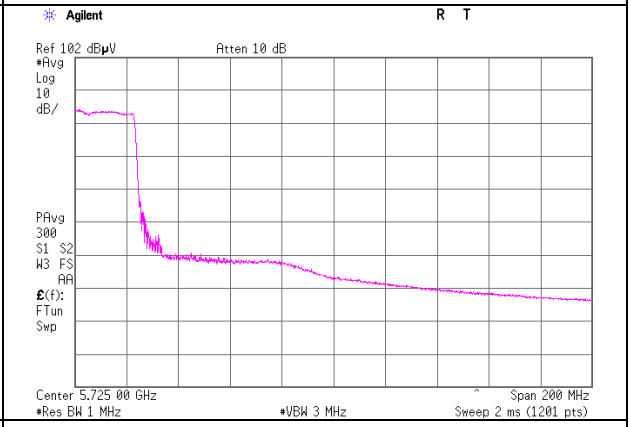
5290 MHz



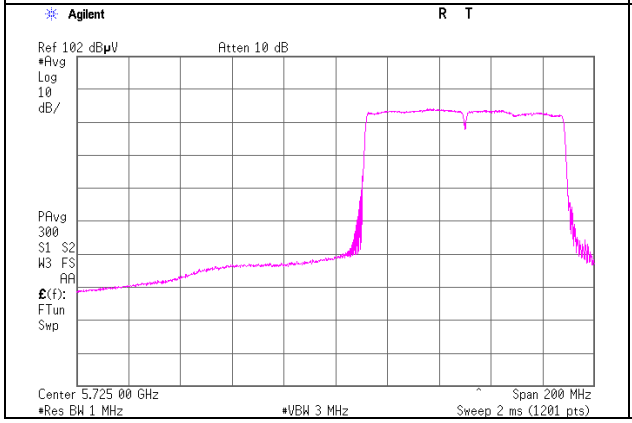
5530 MHz



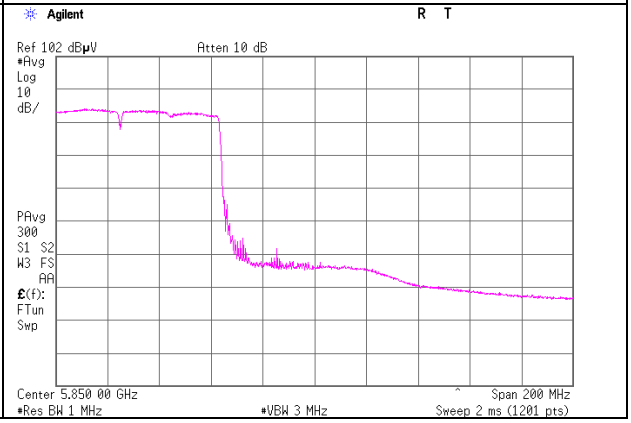
5610 MHz



5775 MHz



5775 MHz



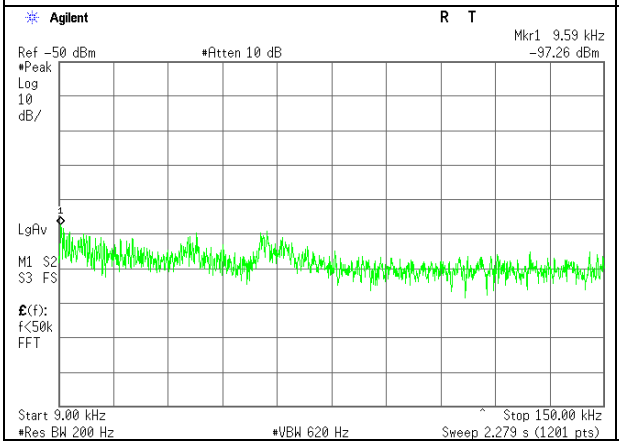
* Final result of band edge was measured as Radiated Spurious Emission. Refer to Radiated Spurious Emission's pages.

Conducted Spurious Emission

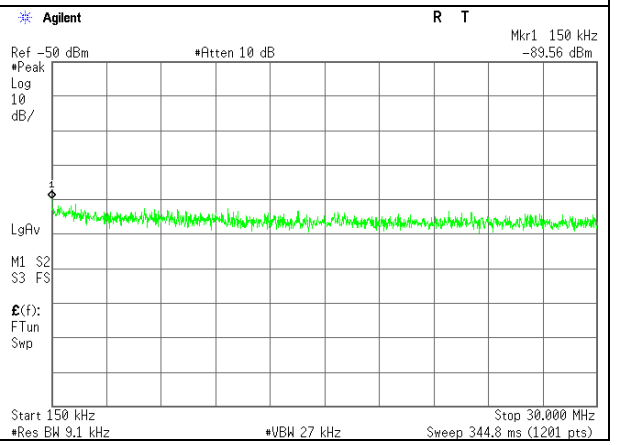
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10662332H
Date	01/26/2015
Temperature/ Humidity	24 deg. C / 35% RH
Engineer	Takumi Shimada
Mode	11n-20 Tx

11n-20 Tx 5260MHz

9kHz-150kHz



150kHz-30MHz



Frequency [kHz]	Reading [dBm]	Cable Loss [dB]	Attenator [dB]	Antenna Gain [dBi]	N (Number of Output	EIRP [dBm]	Distance [m]	Ground bounce [dB]	E (field strength) [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
9.59	-97.3	0.10	10.0	2.0	1	-85.2	300	6.0	-23.9	67.9	91.8	
150.00	-89.6	0.10	10.0	2.0	1	-77.5	300	6.0	-16.2	44.0	60.2	

E=EIRP-20log(D)+Ground bounce +104.8[dBuV/m]

EIRP=Reading+Cable Loss+Attenator+Antenna Gain+10*log(N)

APPENDIX 2: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-01	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	CE	2014/09/01 * 12
MOS-27	Thermo-Hygrometer	CUSTOM	CTH-201	A08Q26	CE	2015/01/13 * 12
MJM-21	Measure	KOMELON	KMC-36	-	CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	CE/RE	-
MTR-09	EMI Test Receiver	Rohde & Schwarz	ESU26	100412	CE	2014/06/06 * 12 *1)
MLS-25	LISN(AMN)	Schwarzbeck	NSLK8127	8127-731	CE	2014/07/09 * 12
MTA-30	Terminator	TME	CT-01	-	CE	2015/01/19 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/TSJ	5D-2W(20m)/3D-2W(7.5m)/RG400u(1.5m)/RFM-E421(Switcher)	-/01068(Switcher)	CE	2014/09/12 * 12
MAT-64	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2015/01/29 * 12
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2014/02/27 * 12 *1)
MOS-13	Thermo-Hygrometer	Custom	CTH-180	1301	RE/AT	2015/01/13 * 12
MJM-16	Measure	KOMELON	KMC-36	-	RE	-
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2014/11/12 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2014/05/26 * 12 *1)
MCC-167	Microwave Cable	Junkosha	MWX221	1404S374(1m) / 1405S074(5m)	RE	2014/05/26 * 12 *1)
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2014/03/24 * 12 *1)
MHF-22	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCB	602	RE	2014/01/16 * 12 *1)
MCC-79	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278923/4	RE	2014/12/15 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2014/05/26 * 12 *1)
MHA-29	Horn Antenna 26.5-40GHz	ETS LINDGREN	3160-10	00152399	RE	2014/09/02 * 12
MCC-54	Microwave Cable	Suhner	SUCOFLEX101	2873(1m) / 2876(5m)	RE	2014/03/11 * 12 *1)
MPA-22	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 /1871328	RE	2014/09/11 * 12
MPM-16	Power Meter	Agilent	8990B	MY51000271	AT	2014/04/04 * 12 *1)
MPSE-23	Power sensor	Agilent	N1923A	MY54070004	AT	2014/04/04 * 12 *1)
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2014/03/13 * 12 *1)
MOS-19	Thermo-Hygrometer	Custom	CTH-201	0001	AT	2014/12/22 * 12
MSA-13	Spectrum Analyzer	Agilent	E4440A	MY46185823	AT	2014/06/06 * 12 *1)
MAT-23	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2015/03/13 * 12
MCC-144	Microwave Cable	Junkosha	MWX221	1207S407	AT	2014/08/08 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	AT	2014/02/20 * 12 *1)
MAT-58	Attenuator(10dB)	Suhner	6810.19.A	-	AT	2015/01/09 * 12
MCC-66	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	28636/2	AT	2014/04/09 * 12 *1)
MOS-14	Thermo-Hygrometer	Custom	CTH-201	1401	AT	2015/01/13 * 12
MTW-06	Torque wrench	HUBER+SUHNER	74 Z-0-0-21	72536	AT	2015/03/05 * 36
MSA-16	Spectrum Analyzer	Agilent	E4440A	MY46186390	AT	2015/02/16 * 12
MCC-138	Microwave cable	HUBER+SUHNER	SUCOFLEX 102	37953/2	AT	2014/10/02 * 12

***1) This test equipment was used for the tests before the expiration date of the calibration.**

The expiration date of the calibration is the end of the expired month.
All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

Test Item: CE: Conducted Emission test
RE: Radiated Emission test
AT: Antenna Terminal Conducted test