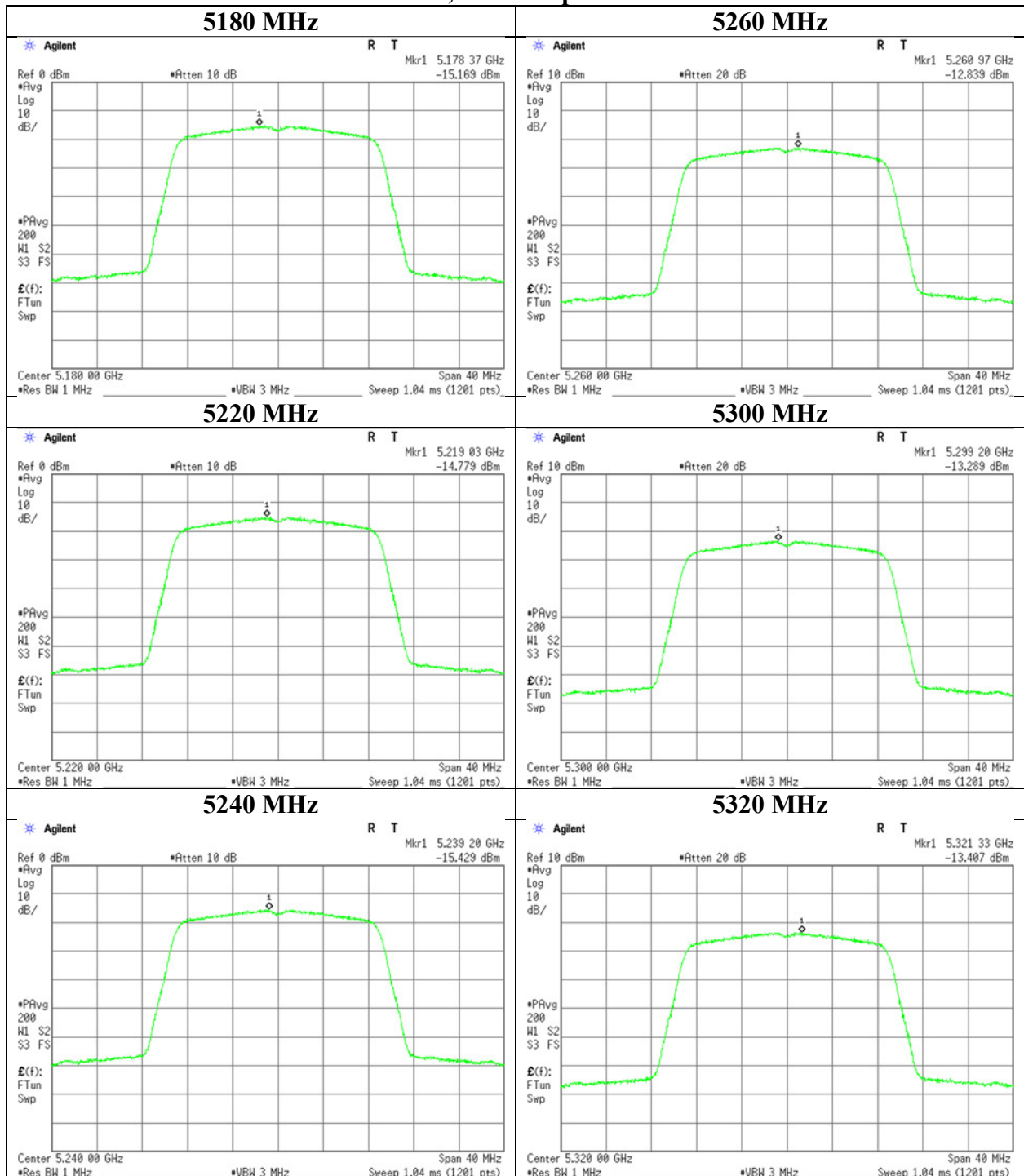


Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-20

11n-20, Antenna port WA



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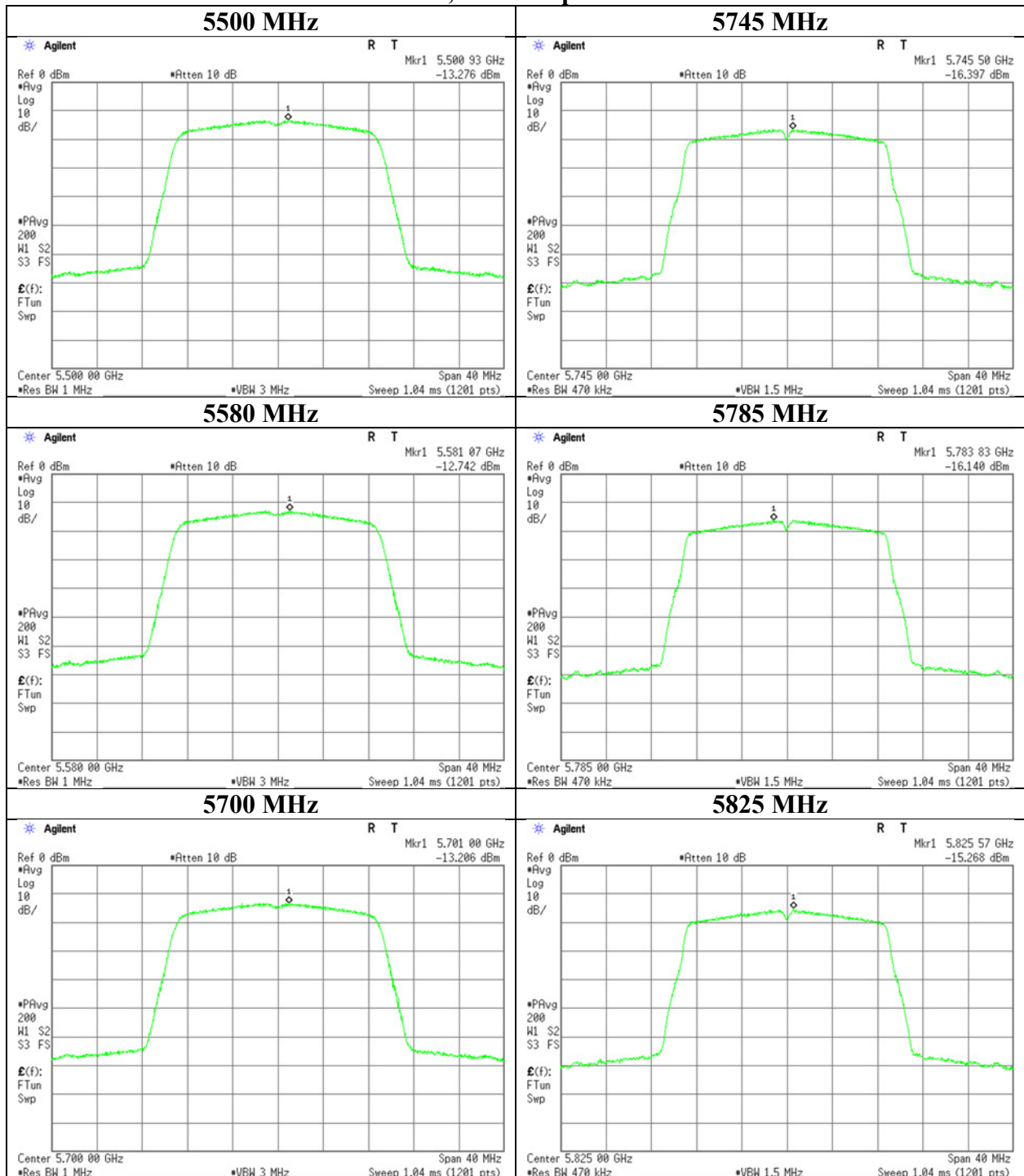
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-20

11n-20, Antenna port WA



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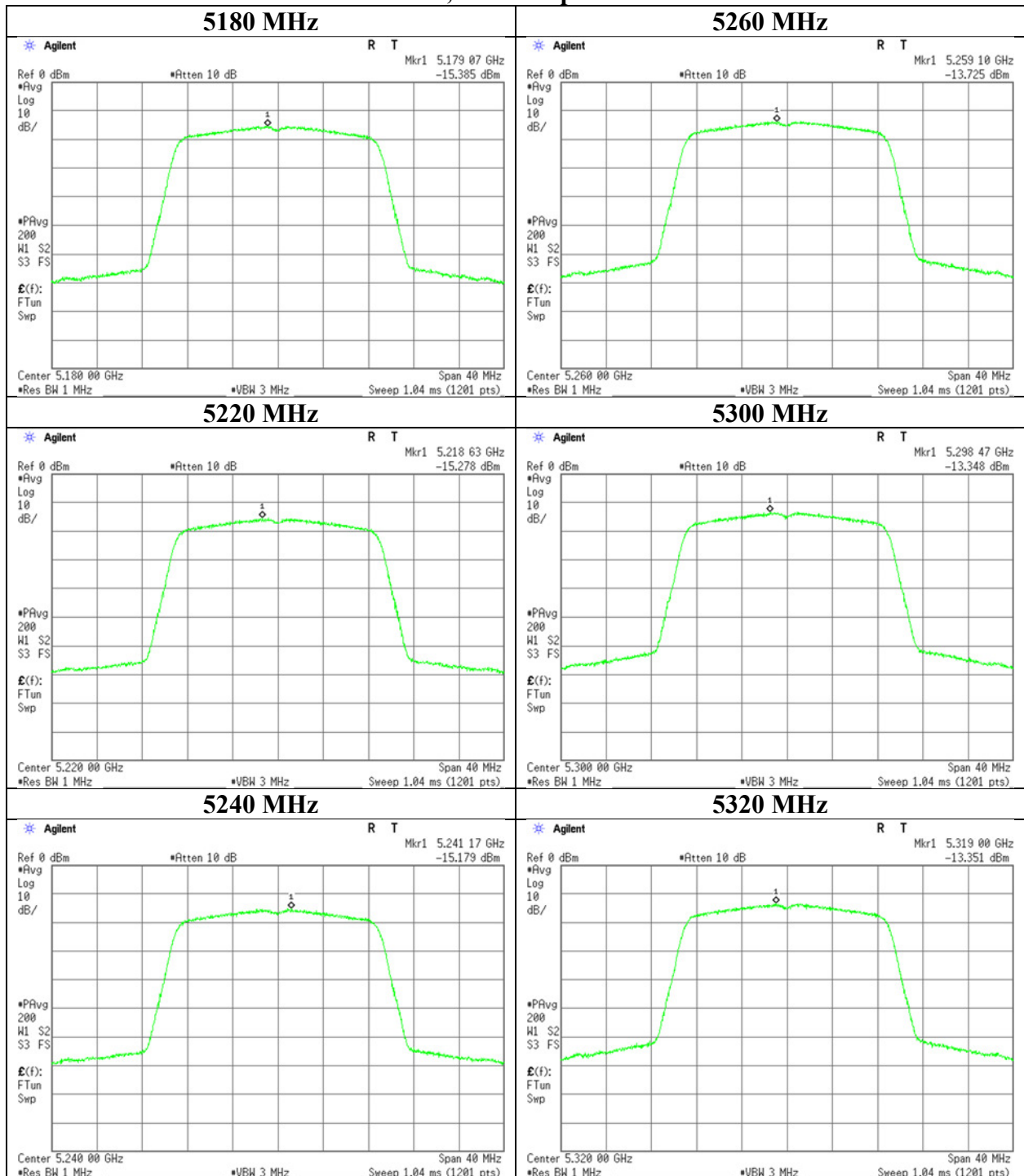
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-20

11n-20, Antenna port WC



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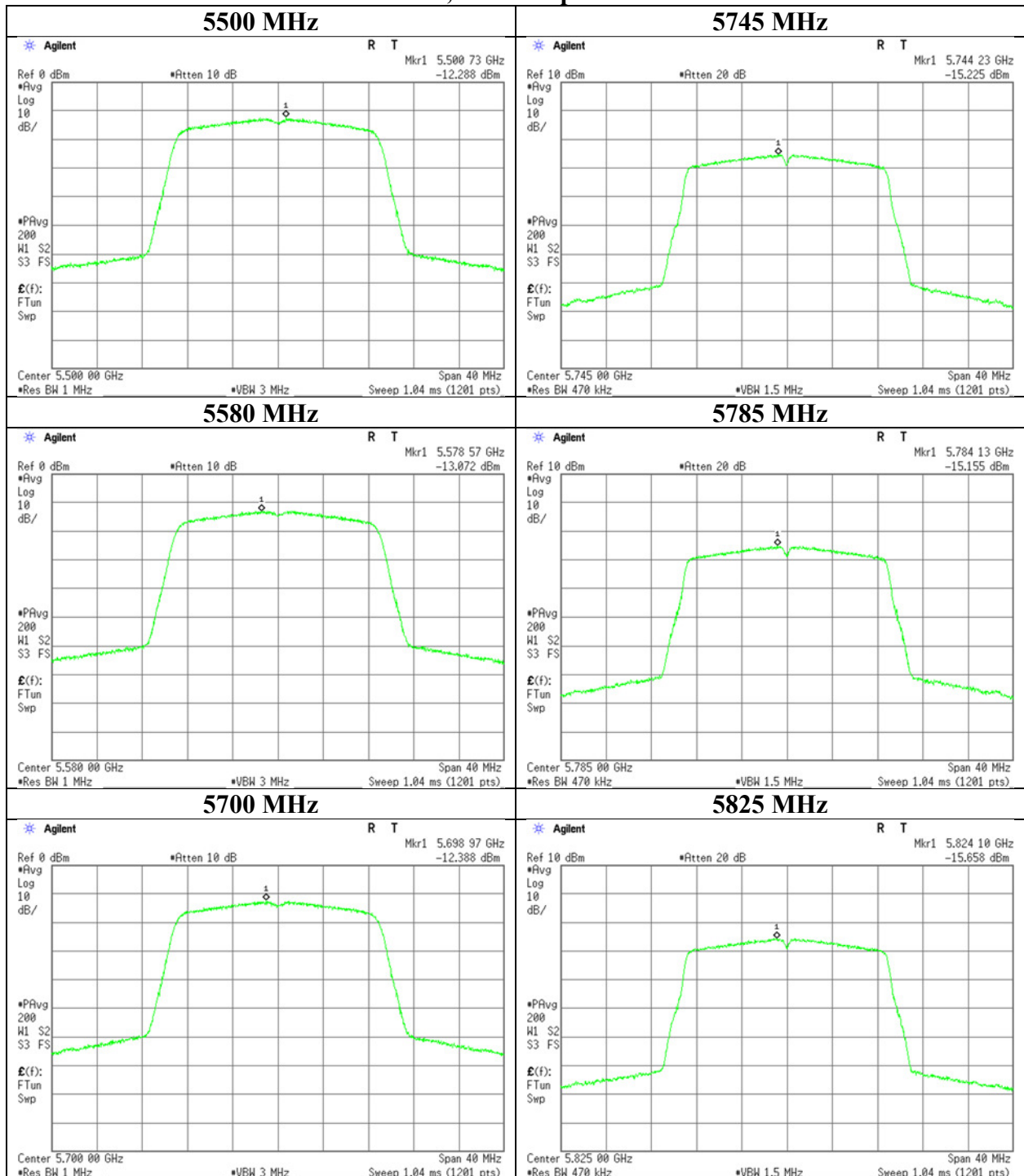
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place : Ise EMC Lab. No.11 Measurement Room
Report No. : 12079941H
Date : January 26, 2018
Temperature / Humidity : 24deg. C / 20 % RH
Engineer : Yuta Moriya
Mode : Tx 11n-20

11n-20, Antenna port WC



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Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place : Ise EMC Lab. No.11 Measurement Room
Report No. : 12079941H
Date : January 29, 2018
Temperature / Humidity : 23deg. C / 32 % RH
Engineer : Takafumi Noguchi
Mode : Tx 11ac-20

Antenna Port WA + WC

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[mW/MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.38	0.38	0.76	-1.20	9.71	10.91	2.02	2.04	4.06	6.09	17.00	10.91
5220	0.36	0.35	0.71	-1.46	9.71	11.17	1.95	1.88	3.83	5.83	17.00	11.17
5240	0.35	0.36	0.71	-1.51	9.71	11.22	1.87	1.92	3.78	5.78	17.00	11.22
5260	0.56	0.51	1.08	0.32	9.71	9.39	3.01	2.75	5.76	7.61	17.00	9.39
5300	0.52	0.56	1.08	0.35	9.71	9.36	2.80	3.00	5.80	7.64	17.00	9.36
5320	0.55	0.52	1.06	0.27	9.71	9.44	2.94	2.77	5.71	7.56	17.00	9.44
5500	0.65	0.64	1.28	1.08	9.71	8.63	3.46	3.41	6.86	8.37	17.00	8.63
5580	0.68	0.67	1.35	1.31	9.71	8.40	3.66	3.59	7.25	8.60	17.00	8.40
5700	0.59	0.72	1.31	1.16	9.71	8.55	3.15	3.84	7.00	8.45	17.00	8.55
5745	0.28	0.45	0.73	-1.38	28.71	30.09	1.50	2.40	3.90	5.91	36.00	30.09
5785	0.30	0.41	0.71	-1.48	28.71	30.19	1.59	2.21	3.81	5.81	36.00	30.19
5825	0.35	0.39	0.74	-1.29	28.71	30.00	1.87	2.11	3.98	6.00	36.00	30.00

Tested Frequency [MHz]	Antenna Port WA							Antenna Port WC						
	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	
							Cond.	e.i.r.p.					Cond.	e.i.r.p.
[dB]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	0.00	0.00	-14.98	0.70	10.05	7.29	-4.23	3.06	-15.02	0.70	10.13	7.29	-4.19	3.10
5220	0.00	0.00	-15.14	0.70	10.05	7.29	-4.39	2.90	-15.37	0.70	10.13	7.29	-4.54	2.75
5240	0.00	0.00	-15.32	0.70	10.05	7.29	-4.57	2.72	-15.30	0.70	10.13	7.29	-4.47	2.82
5260	0.00	0.00	-13.25	0.70	10.05	7.29	-2.50	4.79	-13.73	0.70	10.13	7.29	-2.90	4.39
5300	0.00	0.00	-13.56	0.70	10.05	7.29	-2.81	4.48	-13.36	0.70	10.14	7.29	-2.52	4.77
5320	0.00	0.00	-13.37	0.70	10.06	7.29	-2.61	4.68	-13.71	0.70	10.14	7.29	-2.87	4.42
5500	0.00	0.00	-12.76	0.80	10.06	7.29	-1.90	5.39	-12.91	0.80	10.14	7.29	-1.97	5.32
5580	0.00	0.00	-12.51	0.80	10.06	7.29	-1.65	5.64	-12.68	0.80	10.14	7.29	-1.74	5.55
5700	0.00	0.00	-13.15	0.80	10.05	7.29	-2.30	4.99	-12.37	0.80	10.13	7.29	-1.44	5.85
5745	0.00	0.27	-16.65	0.80	10.05	7.29	-5.53	1.76	-14.69	0.80	10.13	7.29	-3.50	3.79
5785	0.00	0.27	-16.39	0.80	10.05	7.29	-5.27	2.02	-15.03	0.80	10.12	7.29	-3.84	3.45
5825	0.00	0.27	-15.69	0.80	10.05	7.29	-4.57	2.72	-15.24	0.80	10.12	7.29	-4.05	3.24

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 \cdot \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor

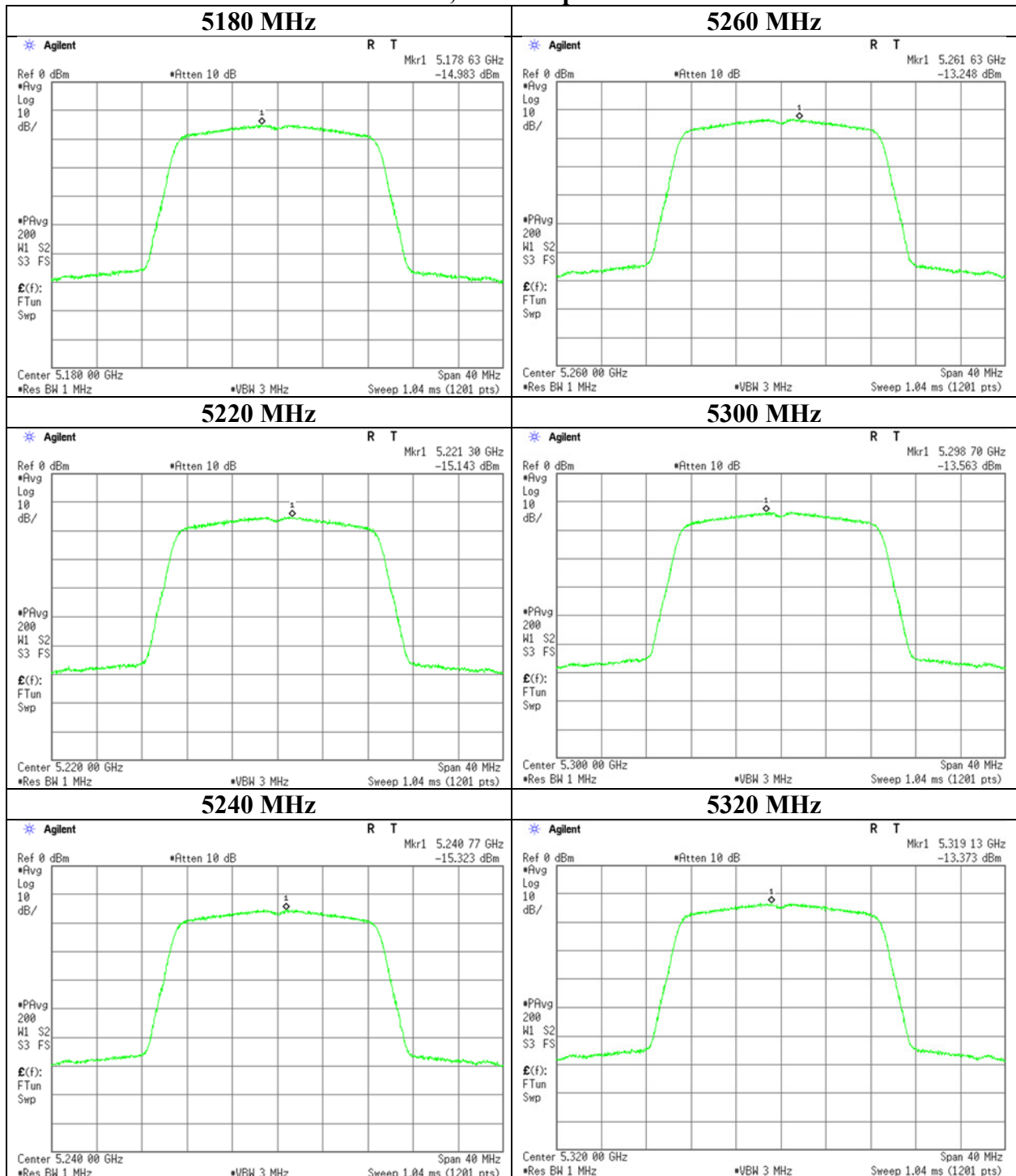
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WA



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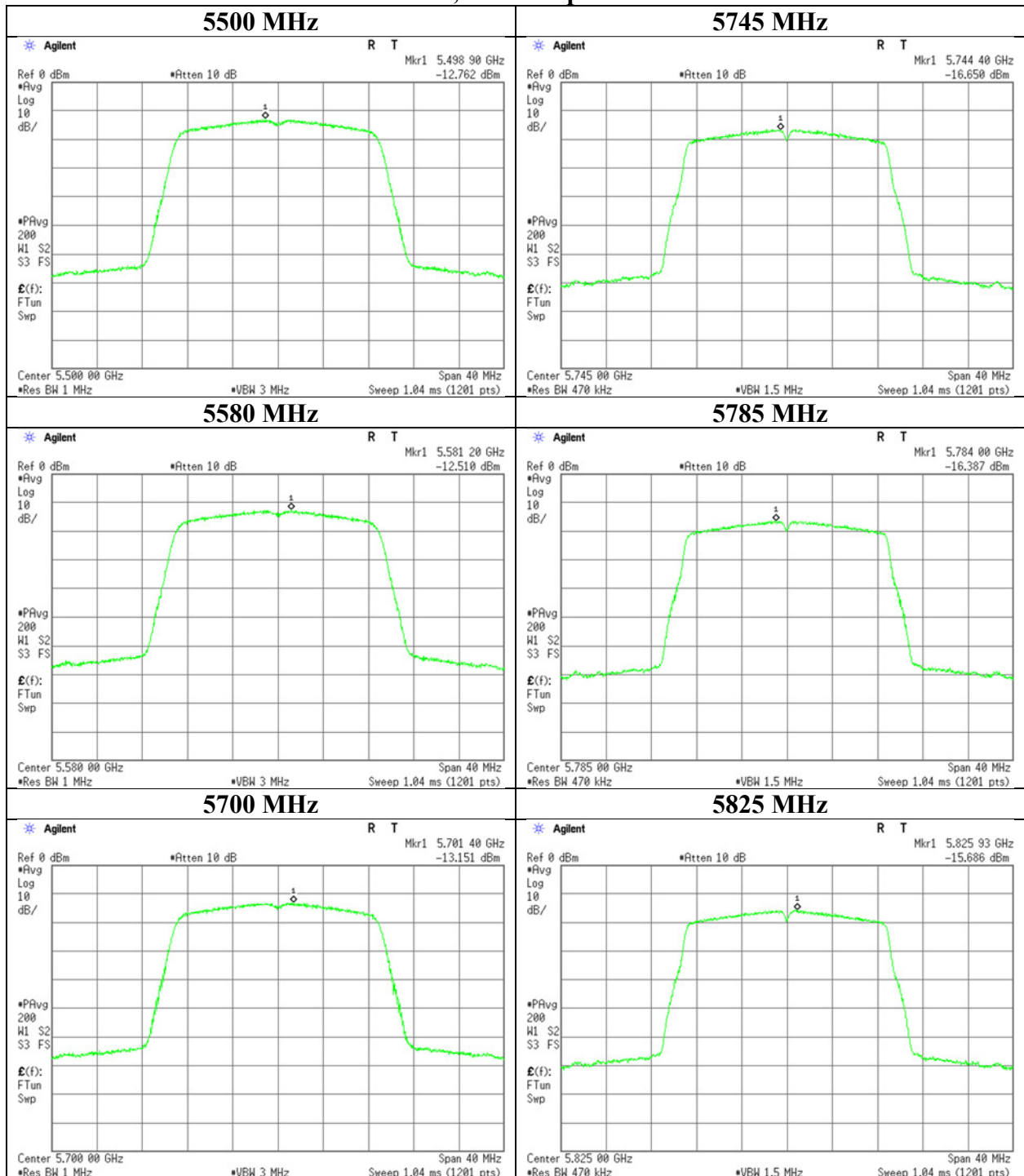
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WA



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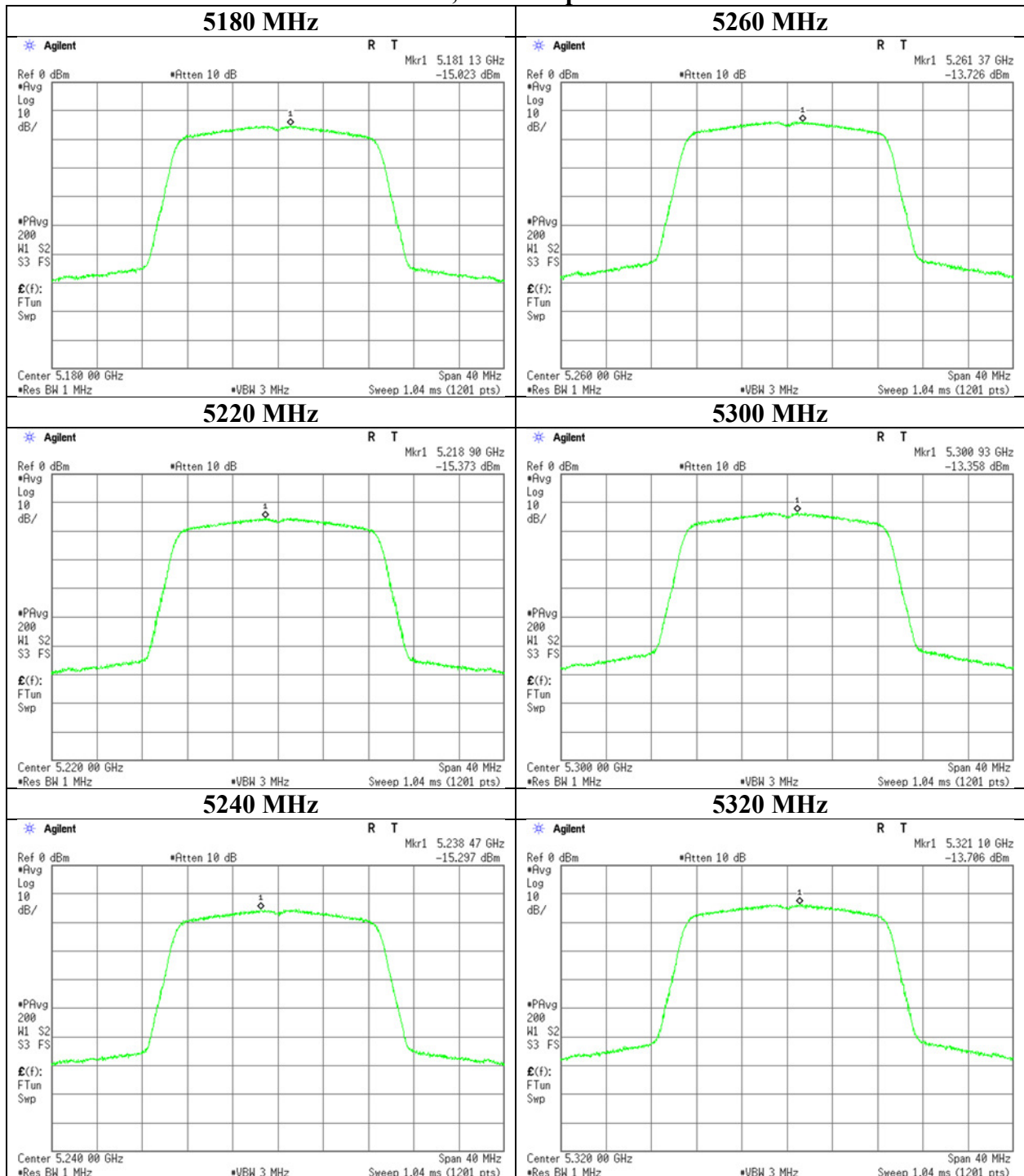
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WC



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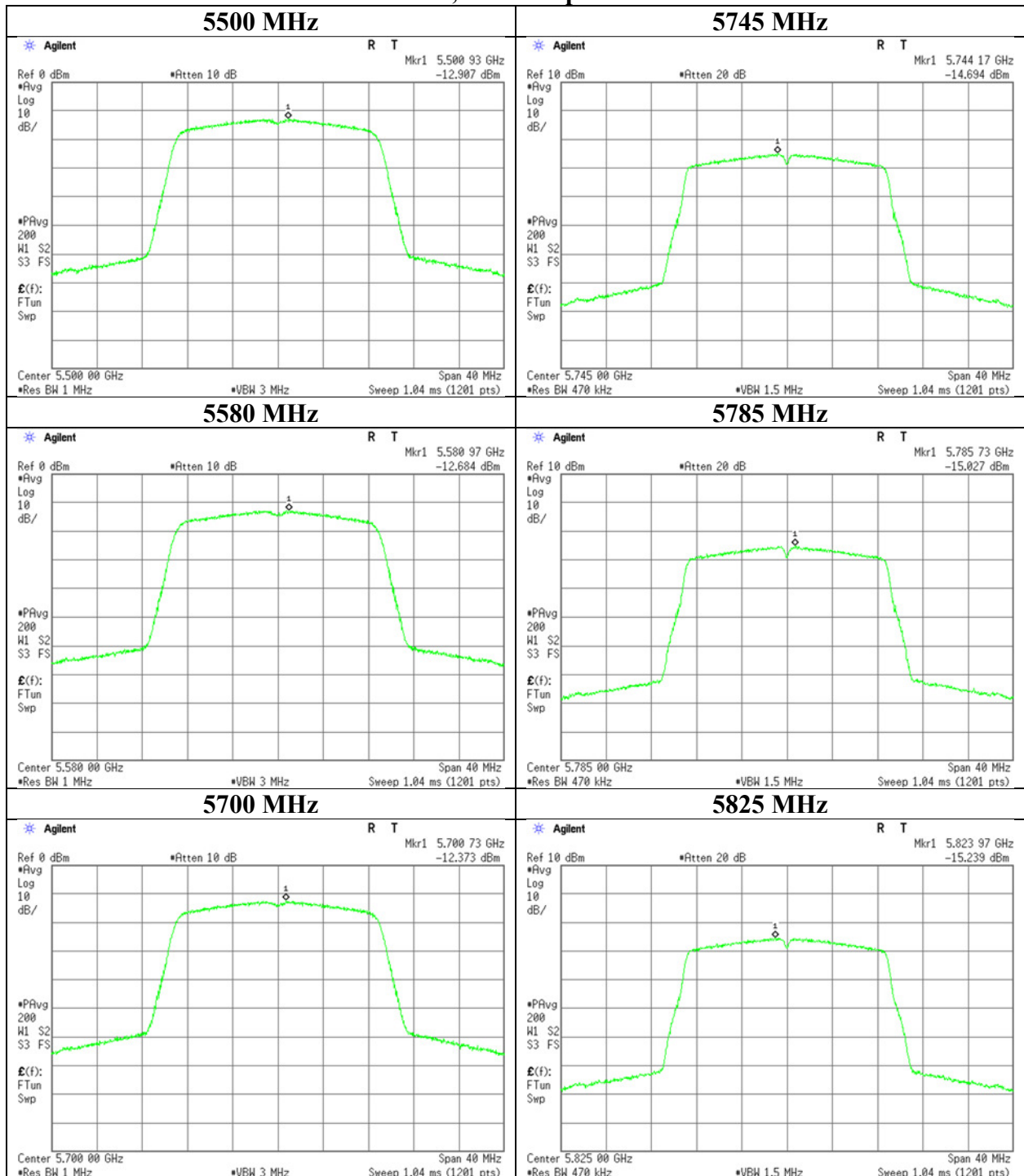
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place : Ise EMC Lab. No.11 Measurement Room
Report No. : 12079941H
Date : January 29, 2018
Temperature / Humidity : 23deg. C / 32 % RH
Engineer : Takafumi Noguchi
Mode : Tx 11ac-20

11ac-20, Antenna port WC



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Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place : Ise EMC Lab. No.11 Measurement Room
Report No. : 12079941H
Date : January 29, 2018
Temperature / Humidity : 23deg. C / 32 % RH
Engineer : Takafumi Noguchi
Mode : Tx 11n-40

Antenna Port WA + WC

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[mW/MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5190	0.14	0.18	0.33	-4.86	9.71	14.57	0.76	0.99	1.75	2.43	17.00	14.57
5230	0.17	0.17	0.34	-4.65	9.71	14.36	0.91	0.93	1.84	2.64	17.00	14.36
5270	0.27	0.26	0.53	-2.73	9.71	12.44	1.47	1.38	2.85	4.56	17.00	12.44
5310	0.27	0.27	0.54	-2.65	9.71	12.36	1.45	1.45	2.91	4.64	17.00	12.36
5510	0.27	0.33	0.60	-2.22	9.71	11.93	1.43	1.78	3.21	5.07	17.00	11.93
5550	0.29	0.31	0.60	-2.24	9.71	11.95	1.55	1.65	3.20	5.05	17.00	11.95
5670	0.27	0.28	0.55	-2.62	9.71	12.33	1.44	1.49	2.93	4.67	17.00	12.33
5755	0.14	0.20	0.34	-4.69	28.71	33.40	0.73	1.09	1.82	2.60	36.00	33.40
5795	0.14	0.21	0.36	-4.49	28.71	33.20	0.77	1.14	1.91	2.80	36.00	33.20

			Antenna Port WA						Antenna Port WC					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5190	0.00	0.00	-19.22	0.70	10.05	7.29	-8.47	-1.18	-18.18	0.70	10.13	7.29	-7.35	-0.06
5230	0.00	0.00	-18.44	0.70	10.05	7.29	-7.69	-0.40	-18.46	0.70	10.13	7.29	-7.63	-0.34
5270	0.00	0.00	-16.36	0.70	10.05	7.29	-5.61	1.68	-16.73	0.70	10.14	7.29	-5.89	1.40
5310	0.00	0.00	-16.43	0.70	10.06	7.29	-5.67	1.63	-16.50	0.70	10.14	7.29	-5.66	1.63
5510	0.00	0.00	-16.60	0.80	10.06	7.29	-5.74	1.56	-15.72	0.80	10.14	7.29	-4.78	2.51
5550	0.00	0.00	-16.24	0.80	10.06	7.29	-5.38	1.91	-16.06	0.80	10.14	7.29	-5.12	2.17
5670	0.00	0.00	-16.57	0.80	10.05	7.29	-5.72	1.57	-16.48	0.80	10.13	7.29	-5.55	1.74
5755	0.00	0.27	-19.79	0.80	10.05	7.29	-8.67	-1.38	-18.10	0.80	10.12	7.29	-6.91	0.38
5795	0.00	0.27	-19.57	0.80	10.05	7.29	-8.45	-1.16	-17.91	0.80	10.12	7.29	-6.72	0.57

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 \cdot \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor

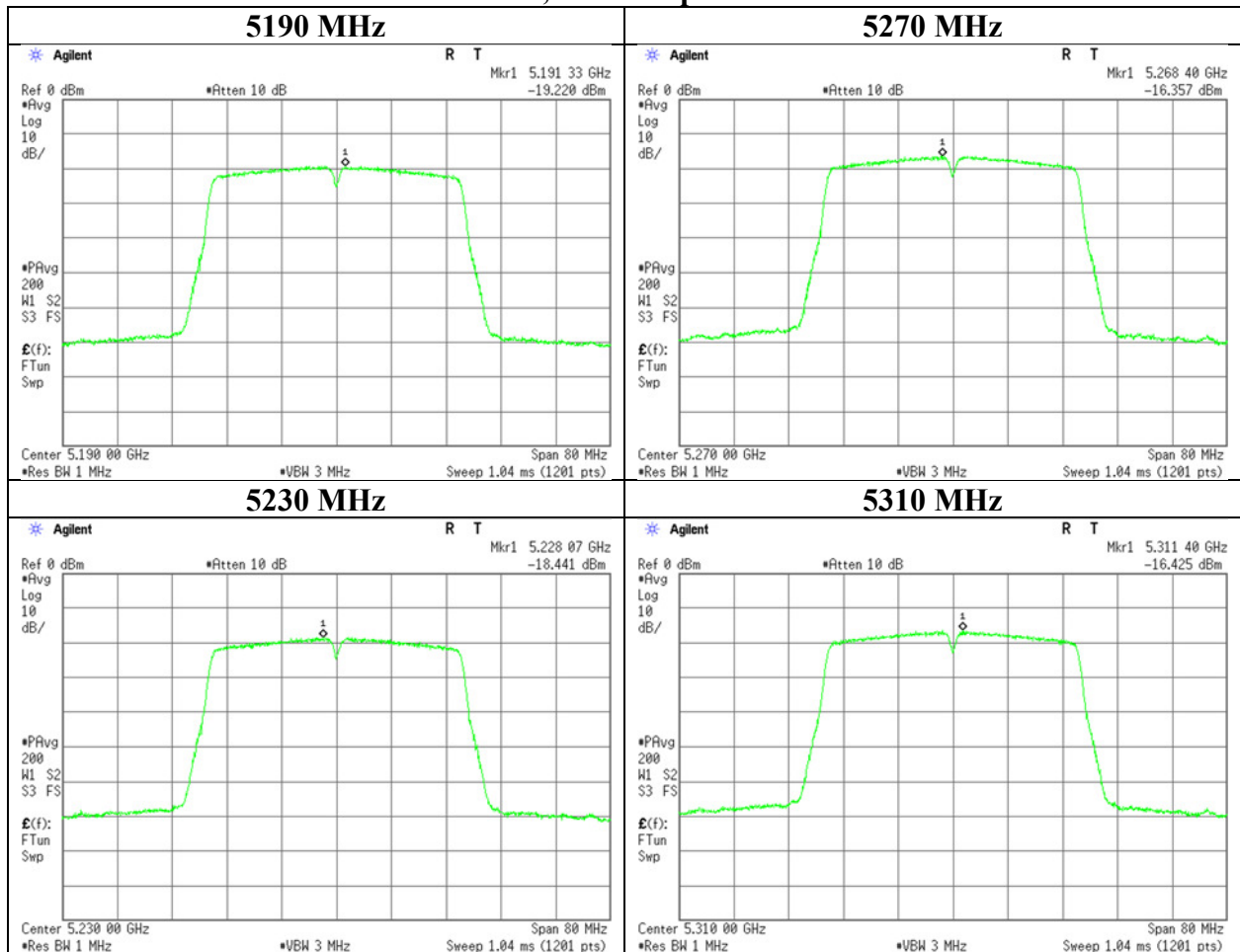
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

11n-40, Antenna port WA



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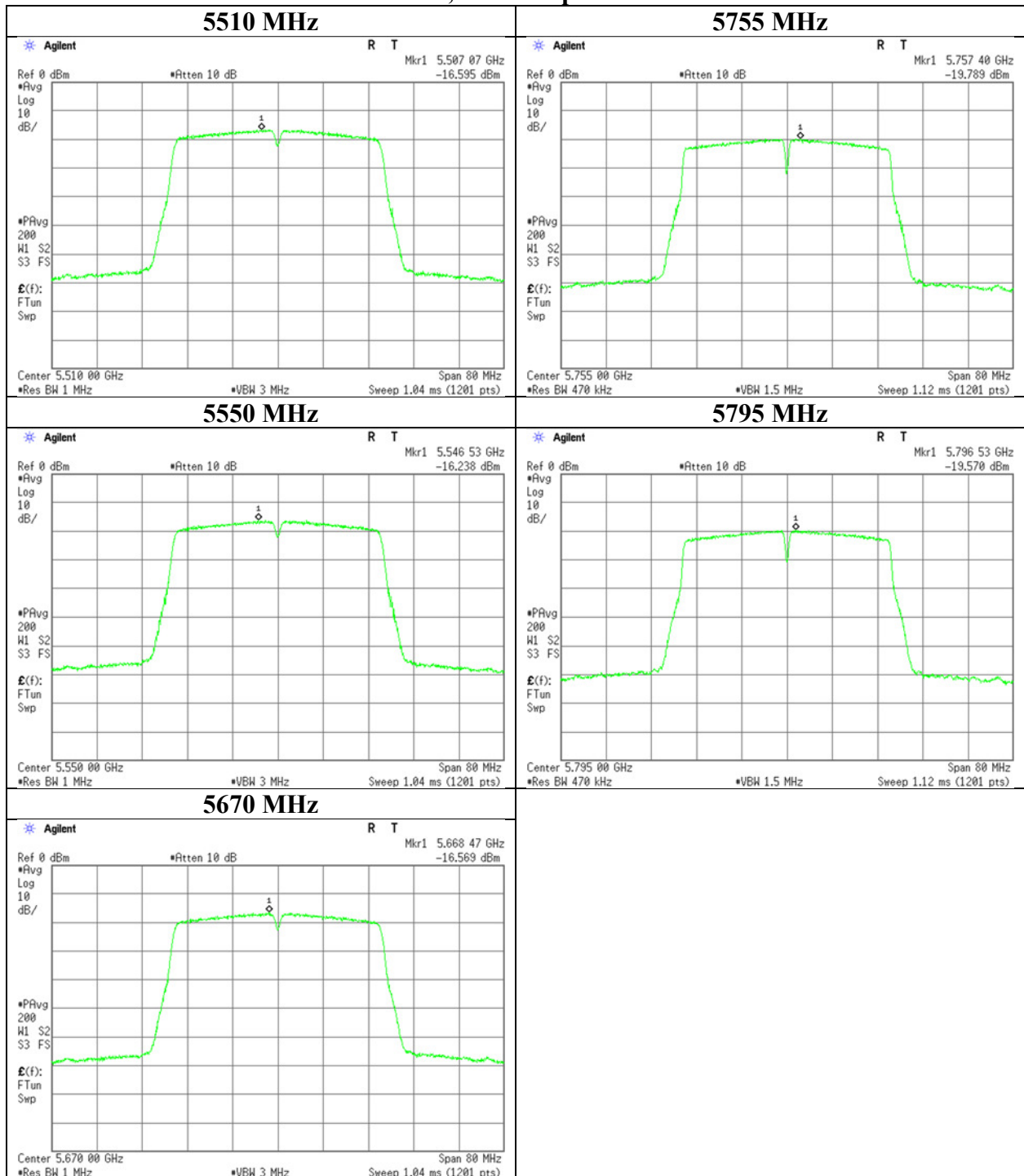
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

11n-40, Antenna port WA



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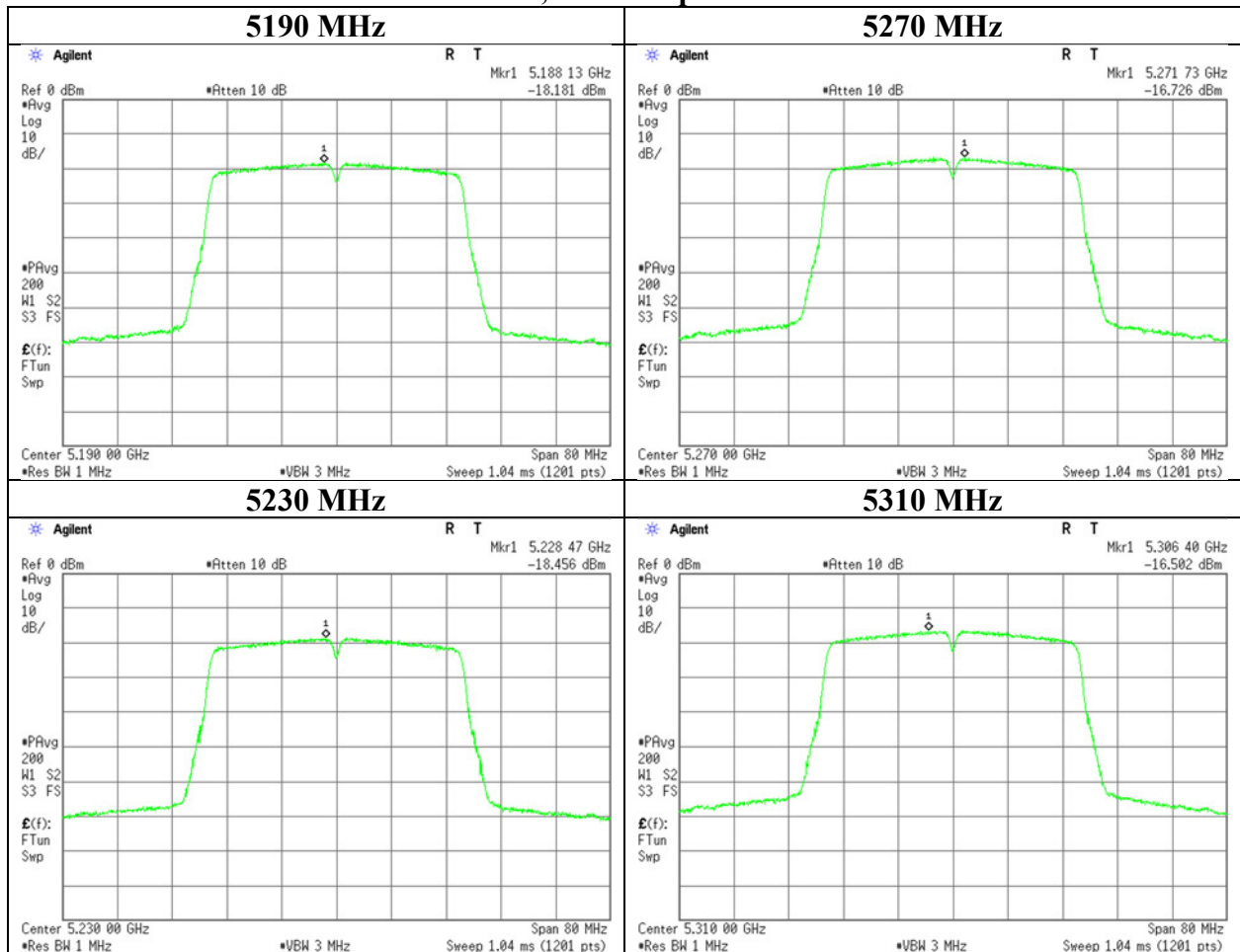
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

11n-40, Antenna port WC



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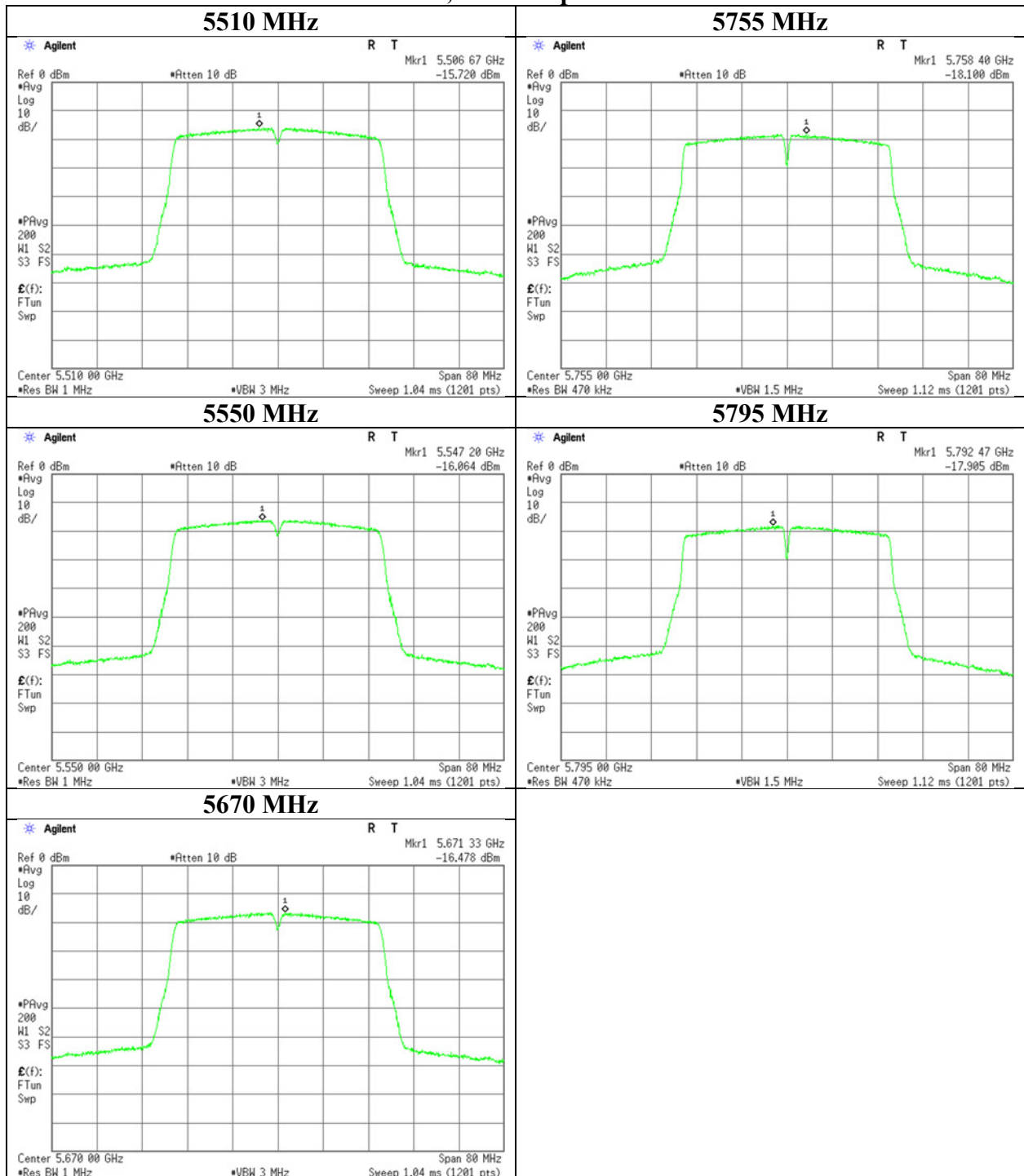
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

11n-40, Antenna port WC



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Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place : Ise EMC Lab. No.11 Measurement Room
Report No. : 12079941H
Date : January 29, 2018
Temperature / Humidity : 23deg. C / 32 % RH
Engineer : Takafumi Noguchi
Mode : Tx 11ac-40

Antenna Port WA + WC

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5190	0.16	0.18	0.34	-4.74	9.71	14.45	0.86	0.94	1.80	2.55	17.00	14.45
5230	0.17	0.18	0.35	-4.56	9.71	14.27	0.94	0.94	1.87	2.73	17.00	14.27
5270	0.27	0.25	0.52	-2.80	9.71	12.51	1.45	1.36	2.81	4.49	17.00	12.51
5310	0.25	0.27	0.52	-2.85	9.71	12.56	1.34	1.44	2.78	4.44	17.00	12.56
5510	0.27	0.31	0.57	-2.41	9.71	12.12	1.44	1.63	3.08	4.88	17.00	12.12
5550	0.28	0.32	0.60	-2.21	9.71	11.92	1.50	1.72	3.22	5.08	17.00	11.92
5670	0.29	0.27	0.56	-2.54	9.71	12.25	1.55	1.44	2.99	4.75	17.00	12.25
5755	0.13	0.18	0.31	-5.03	28.71	33.74	0.69	0.99	1.68	2.26	36.00	33.74
5795	0.14	0.20	0.33	-4.78	28.71	33.49	0.73	1.05	1.78	2.51	36.00	33.49

			Antenna Port WA						Antenna Port WC					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Cond.	Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Cond.	Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5190	0.00	0.00	-18.70	0.70	10.05	7.29	-7.95	-0.66	-18.39	0.70	10.13	7.29	-7.56	-0.27
5230	0.00	0.00	-18.33	0.70	10.05	7.29	-7.58	-0.29	-18.39	0.70	10.13	7.29	-7.56	-0.27
5270	0.00	0.00	-16.42	0.70	10.05	7.29	-5.67	1.62	-16.80	0.70	10.14	7.29	-5.96	1.33
5310	0.00	0.00	-16.78	0.70	10.06	7.29	-6.02	1.28	-16.54	0.70	10.14	7.29	-5.70	1.59
5510	0.00	0.00	-16.55	0.80	10.06	7.29	-5.69	1.60	-16.10	0.80	10.14	7.29	-5.16	2.13
5550	0.00	0.00	-16.39	0.80	10.06	7.29	-5.53	1.76	-15.87	0.80	10.14	7.29	-4.93	2.36
5670	0.00	0.00	-16.25	0.80	10.05	7.29	-5.40	1.90	-16.64	0.80	10.13	7.29	-5.71	1.58
5755	0.00	0.27	-19.99	0.80	10.05	7.29	-8.87	-1.58	-18.54	0.80	10.12	7.29	-7.35	-0.06
5795	0.00	0.27	-19.76	0.80	10.05	7.29	-8.64	-1.35	-18.27	0.80	10.12	7.29	-7.08	0.21

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 \cdot \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor

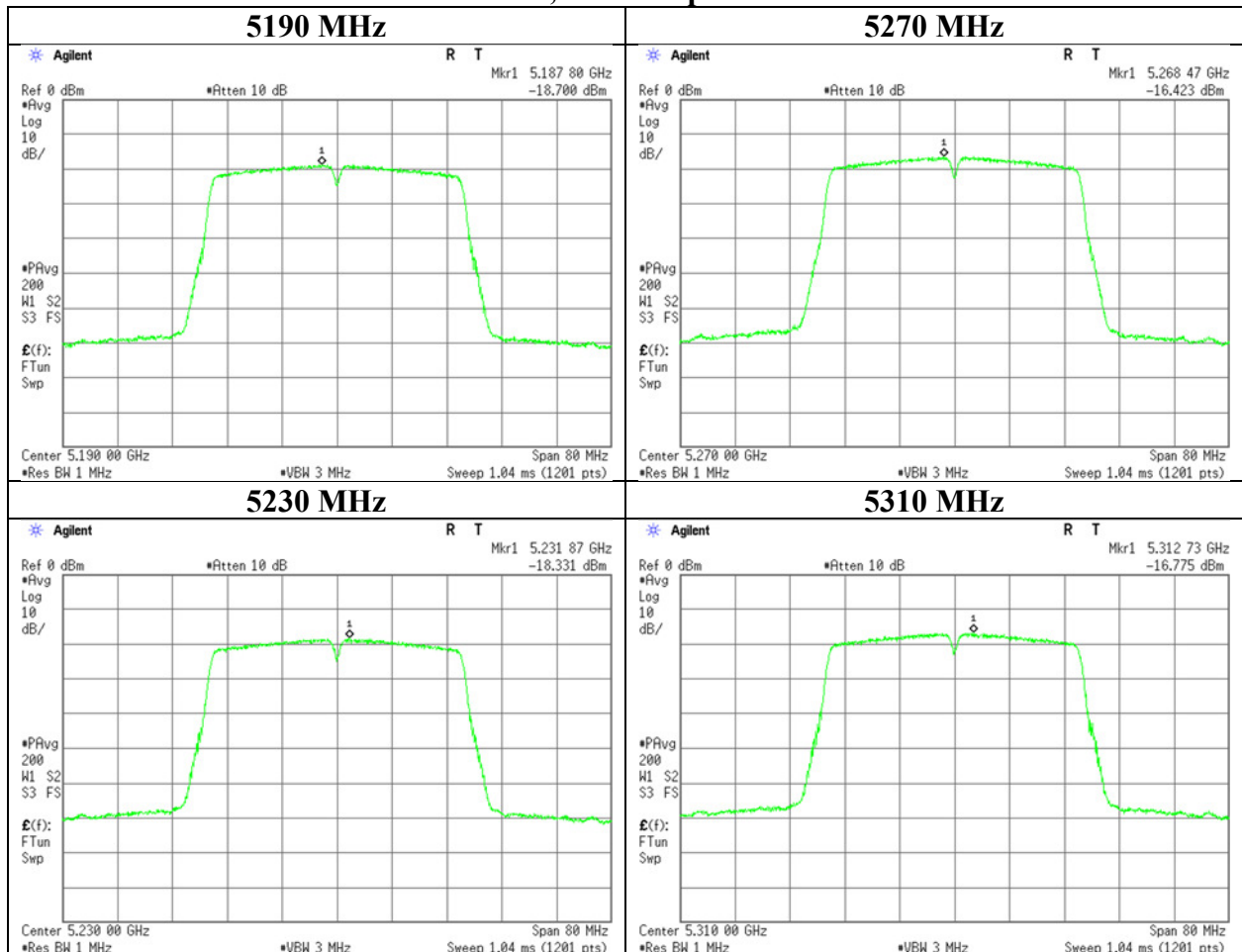
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

11ac-40, Antenna port WA



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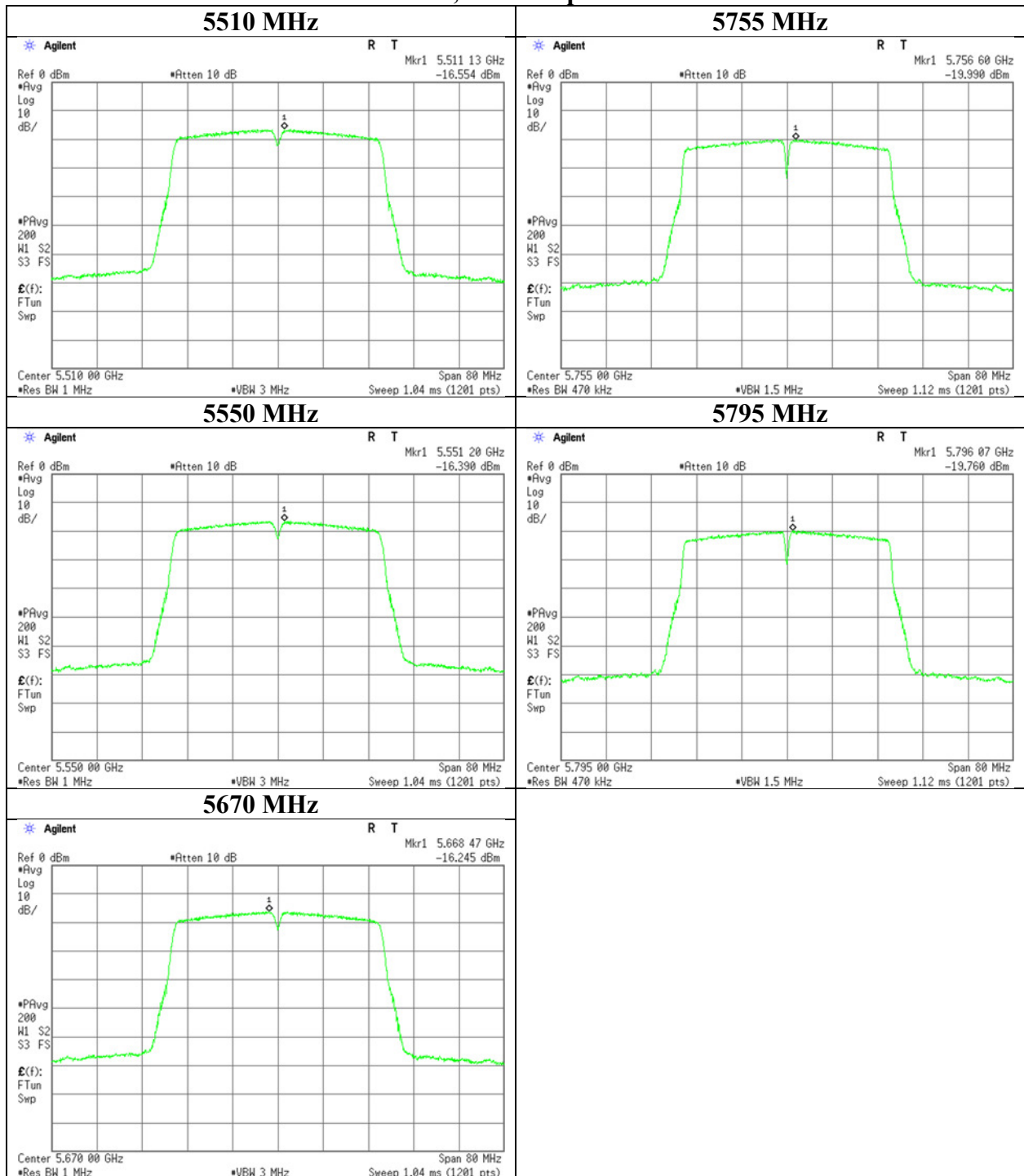
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

11ac-40, Antenna port WA



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Ise EMC Lab.

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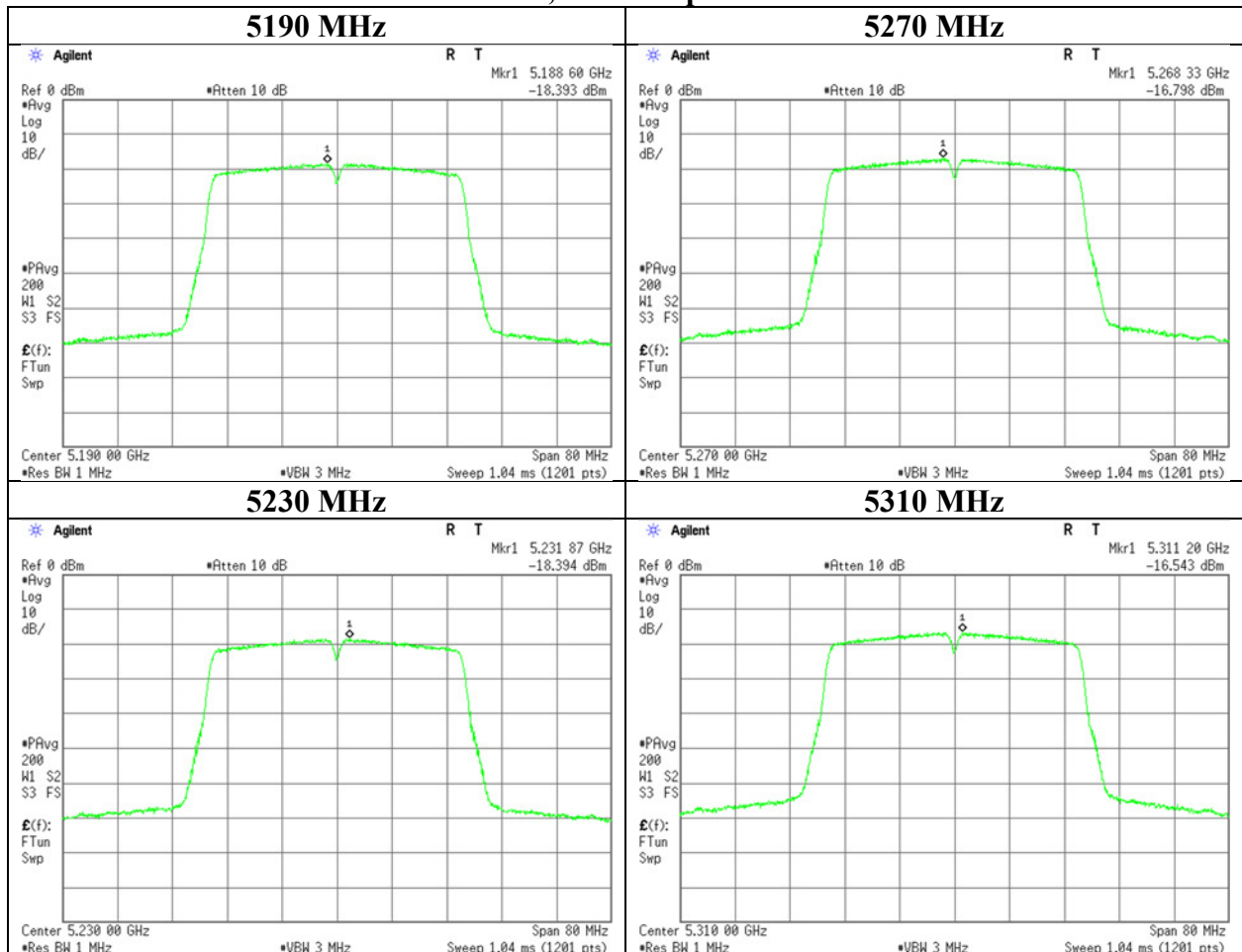
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

11ac-40, Antenna port WC



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Ise EMC Lab.

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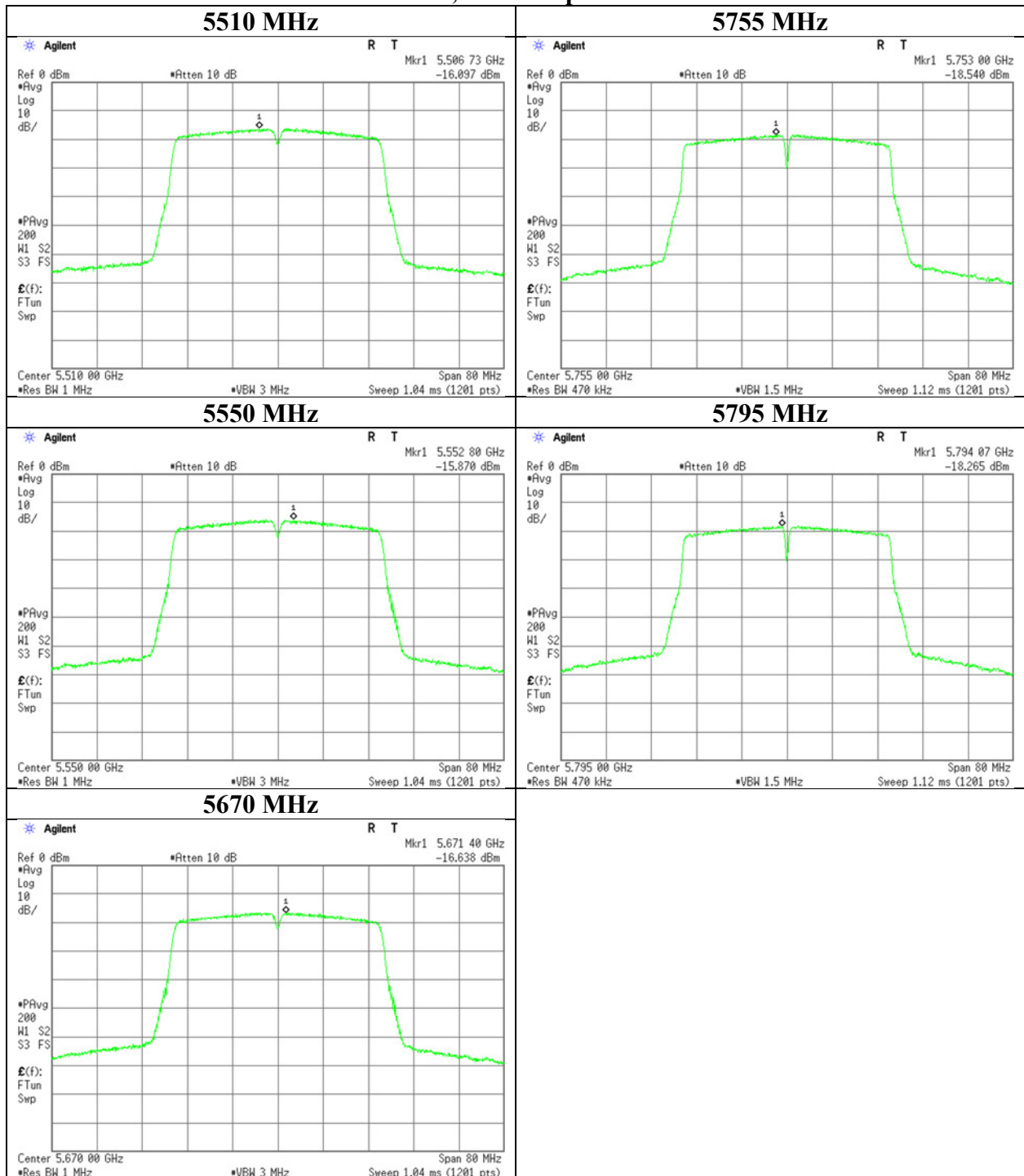
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

11ac-40, Antenna port WC



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Maximum Power Spectral Density

Test place : Ise EMC Lab. No.11 Measurement Room
Report No. : 12079941H
Date : January 29, 2018
Temperature / Humidity : 23deg. C / 32 % RH
Engineer : Takafumi Noguchi
Mode : Tx 11ac-80

Antenna Port WA + WC

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[mW/MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5210	0.08	0.08	0.16	-7.98	9.71	17.69	0.41	0.44	0.85	-0.69	17.00	17.69
5290	0.10	0.12	0.22	-6.59	9.71	16.30	0.52	0.66	1.18	0.70	17.00	16.30
5530	0.13	0.13	0.25	-5.94	9.71	15.65	0.67	0.69	1.36	1.35	17.00	15.65
5610	0.14	0.14	0.28	-5.52	9.71	15.23	0.75	0.76	1.50	1.77	17.00	15.23
5775	0.06	0.09	0.15	-8.30	28.71	37.01	0.32	0.48	0.79	-1.01	36.00	37.01

Antenna Port WA								Antenna Port WC						
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	
							Cond.	e.i.r.p.					Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5210	0.00	0.00	-21.88	0.70	10.05	7.29	-11.13	-3.84	-21.68	0.70	10.13	7.29	-10.85	-3.56
5290	0.00	0.00	-20.91	0.70	10.06	7.29	-10.15	-2.86	-19.95	0.70	10.14	7.29	-9.11	-1.82
5530	0.00	0.00	-19.86	0.80	10.06	7.29	-9.00	-1.71	-19.84	0.80	10.14	7.29	-8.90	-1.61
5610	0.00	0.00	-19.41	0.80	10.05	7.29	-8.56	-1.27	-19.43	0.80	10.13	7.29	-8.50	-1.21
5775	0.00	0.27	-23.42	0.80	10.05	7.29	-12.30	-5.01	-21.70	0.80	10.12	7.29	-10.51	-3.22

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 \cdot \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor

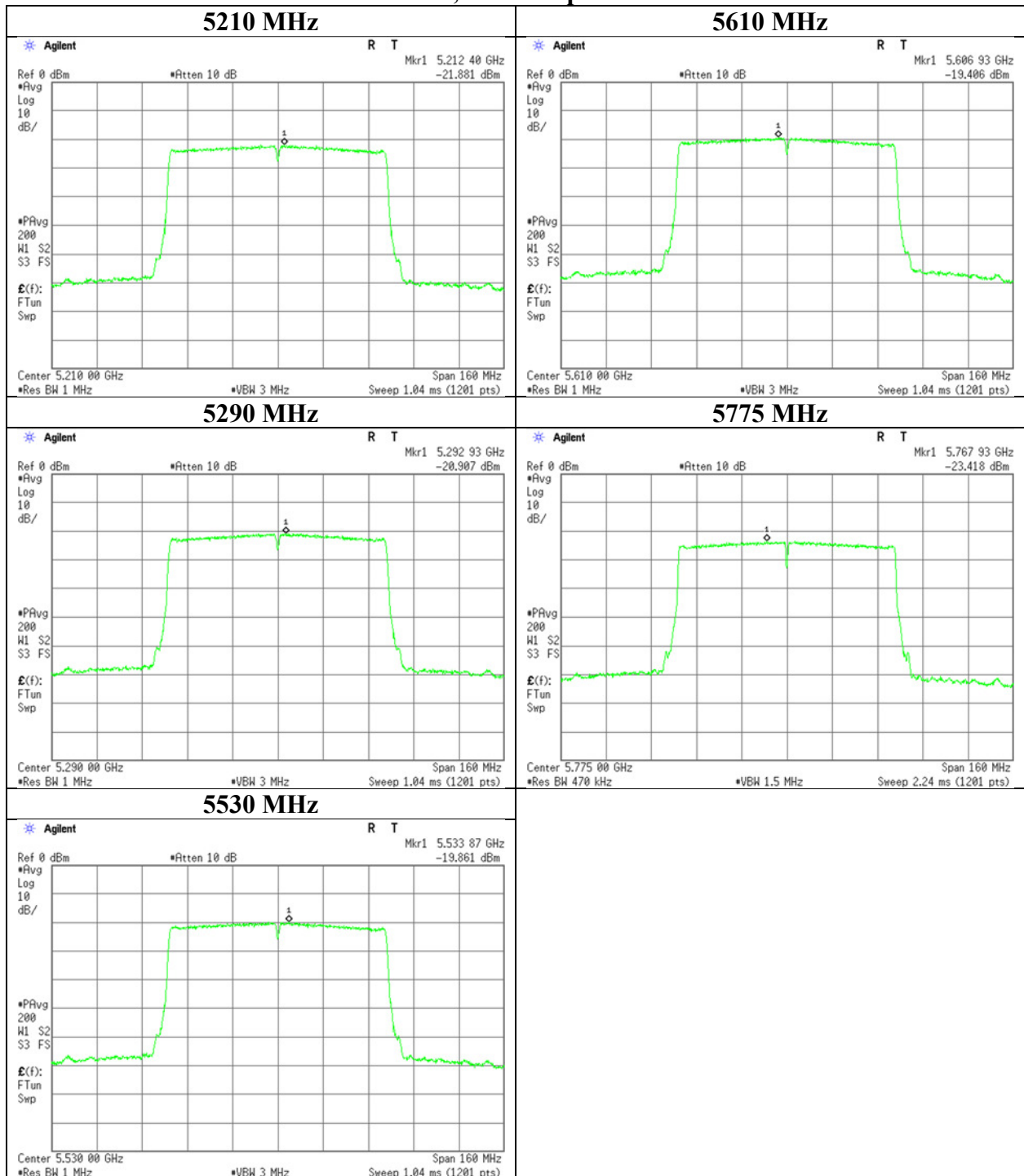
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

11ac-80, Antenna port WA



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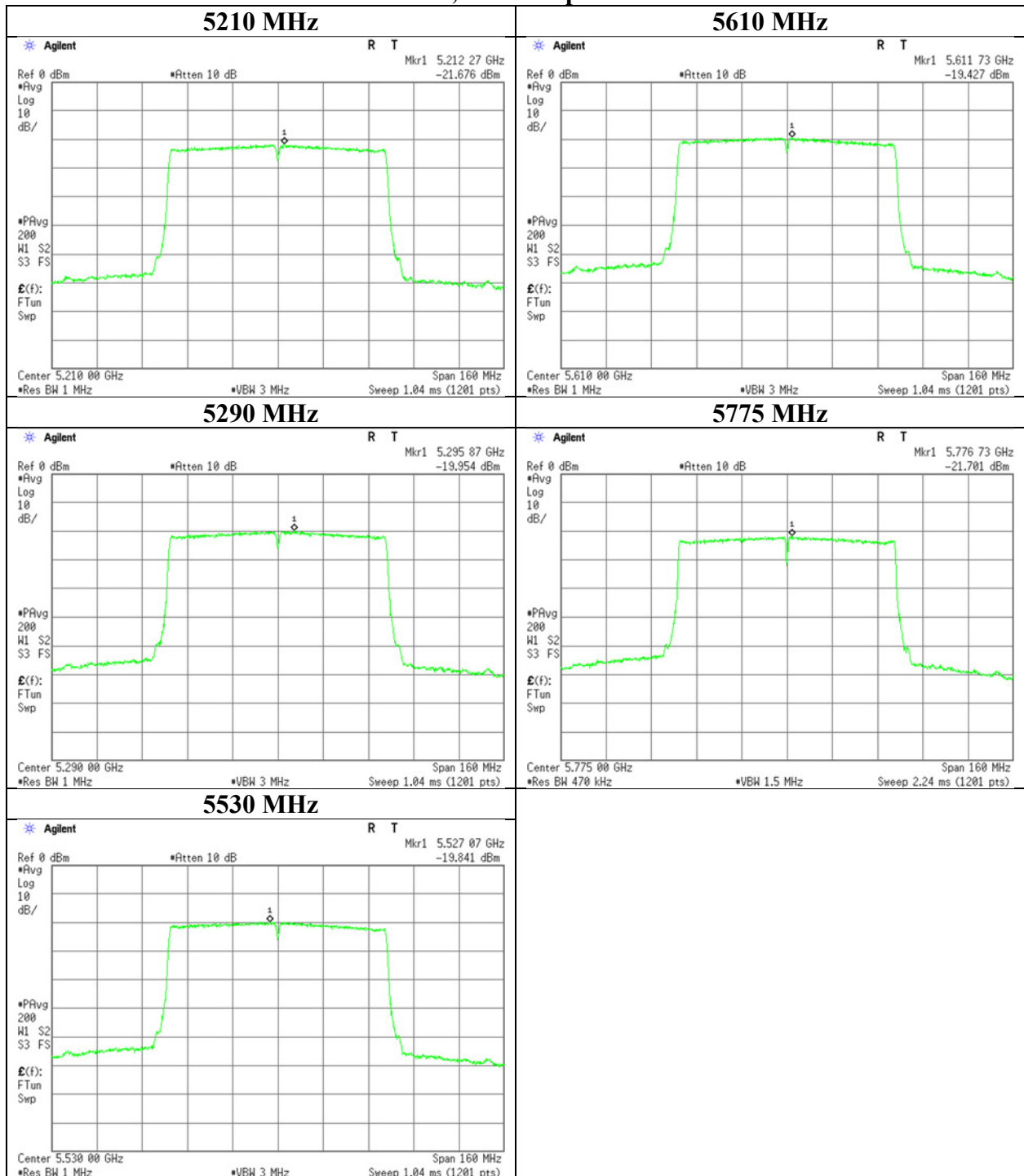
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

11ac-80, Antenna port WC



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Facsimile : +81 596 24 8124

Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
Mode	(10 GHz - 18 GHz) Tx 11ac-20 5180 MHz	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)

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	43.6	32.2	7.3	31.3	-	51.8	73.9	22.1	
Hori	10360.000	PK	42.5	39.5	-2.3	33.2	-	46.5	73.9	27.4	Floor noise
Hori	15540.000	PK	43.8	39.0	-0.3	32.6	-	49.9	73.9	24.0	Floor noise
Hori	5150.000	AV	33.3	32.2	7.3	31.3	-	41.5	53.9	12.4	
Hori	10360.000	AV	33.3	39.5	-2.3	33.2	-	37.3	53.9	16.6	Floor noise
Hori	15540.000	AV	35.3	39.0	-0.3	32.6	-	41.4	53.9	12.5	Floor noise
Vert	5150.000	PK	43.5	32.2	7.3	31.3	-	51.7	73.9	22.2	
Vert	10360.000	PK	43.0	39.5	-2.3	33.2	-	47.0	73.9	26.9	Floor noise
Vert	15540.000	PK	43.8	39.0	-0.3	32.6	-	49.9	73.9	24.0	Floor noise
Vert	5150.000	AV	33.2	32.2	7.3	31.3	-	41.4	53.9	12.5	
Vert	10360.000	AV	32.9	39.5	-2.3	33.2	-	36.9	53.9	17.0	Floor noise
Vert	15540.000	AV	33.8	39.0	-0.3	32.6	-	39.9	53.9	14.0	Floor noise

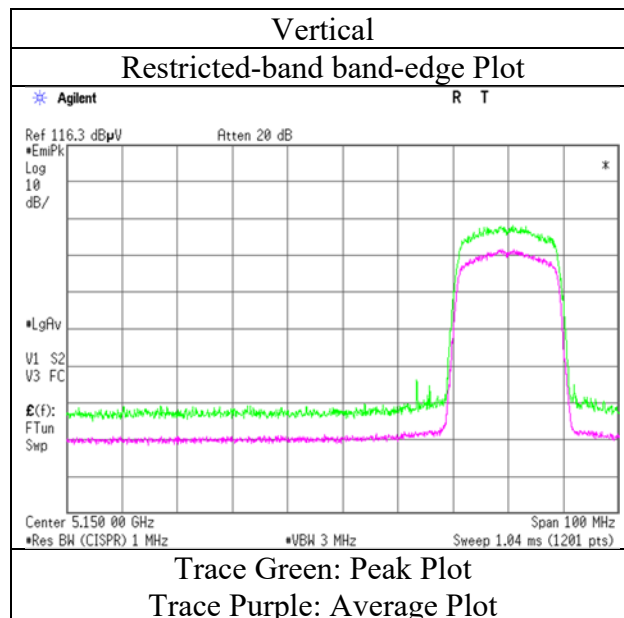
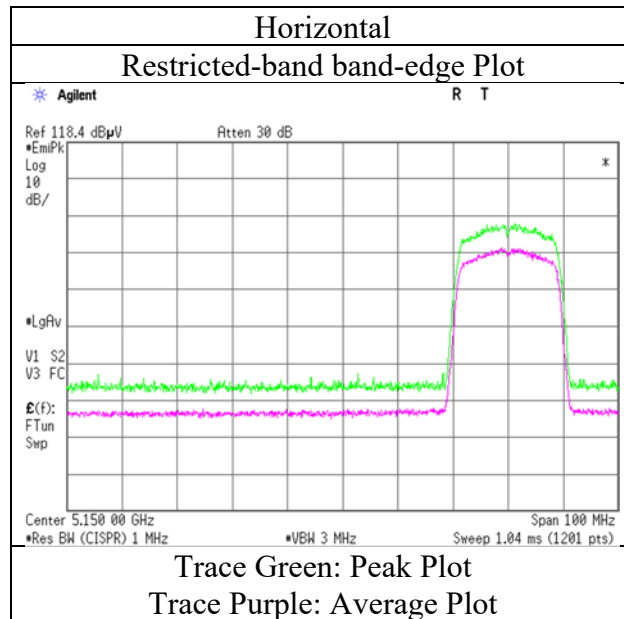
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5180 MHz



* Final result of restricted band edge was shown in tabular data.

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Facsimile : +81 596 24 8124

Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5260 MHz			

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	10520.000	PK	42.9	39.7	-3.3	33.2	-	46.1	73.9	27.8	Floor noise
Hori	15780.000	PK	43.6	38.3	-1.5	32.6	-	47.8	73.9	26.1	Floor noise
Hori	10520.000	AV	34.0	39.7	-3.3	33.2	-	37.2	53.9	16.7	Floor noise
Hori	15780.000	AV	35.4	38.3	-1.5	32.6	-	39.6	53.9	14.3	Floor noise
Vert	10520.000	PK	43.2	39.7	-3.3	33.2	-	46.4	73.9	27.5	Floor noise
Vert	15780.000	PK	43.4	38.3	-1.5	32.6	-	47.6	73.9	26.3	Floor noise
Vert	10520.000	AV	33.1	39.7	-3.3	33.2	-	36.3	53.9	17.6	Floor noise
Vert	15780.000	AV	34.9	38.3	-1.5	32.6	-	39.1	53.9	14.8	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
Mode	(10 GHz - 18 GHz) Tx 11ac-20 5320 MHz	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)

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	43.7	32.1	7.4	31.3	-	51.9	73.9	22.0	
Hori	10640.000	PK	42.5	39.9	-2.4	33.2	-	46.8	73.9	27.1	Floor noise
Hori	15960.000	PK	43.3	37.8	-0.1	32.6	-	48.4	73.9	25.5	Floor noise
Hori	5350.000	AV	35.2	32.1	7.4	31.3	-	43.4	53.9	10.5	
Hori	10640.000	AV	33.3	39.9	-2.4	33.2	-	37.6	53.9	16.3	Floor noise
Hori	15960.000	AV	34.3	37.8	0.3	32.6	-	39.8	53.9	14.1	Floor noise
Vert	5350.000	PK	44.5	32.1	7.4	31.3	-	52.7	73.9	21.2	
Vert	10640.000	PK	42.5	39.9	-2.4	33.2	-	46.8	73.9	27.1	Floor noise
Vert	15960.000	PK	43.4	37.8	-0.1	32.6	-	48.5	73.9	25.4	Floor noise
Vert	5350.000	AV	35.8	32.1	7.4	31.3	-	44.0	53.9	9.9	
Vert	10640.000	AV	33.1	39.9	-2.4	33.2	-	37.4	53.9	16.5	Floor noise
Vert	15960.000	AV	34.2	37.8	-0.1	32.6	-	39.3	53.9	14.6	Floor noise

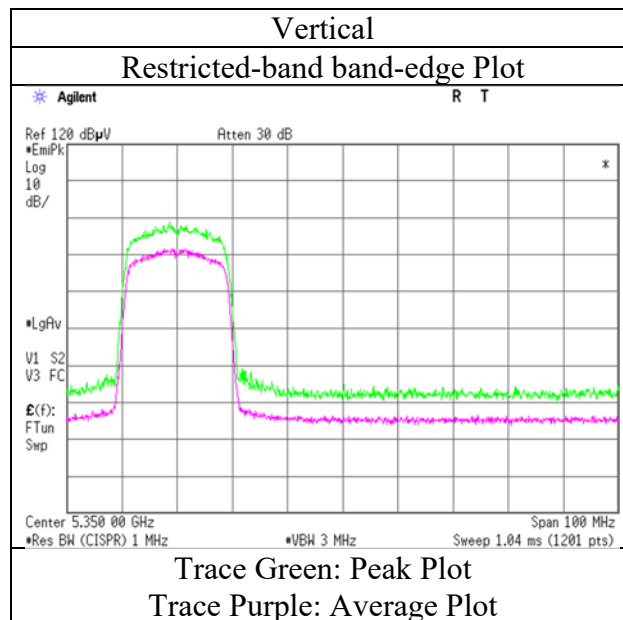
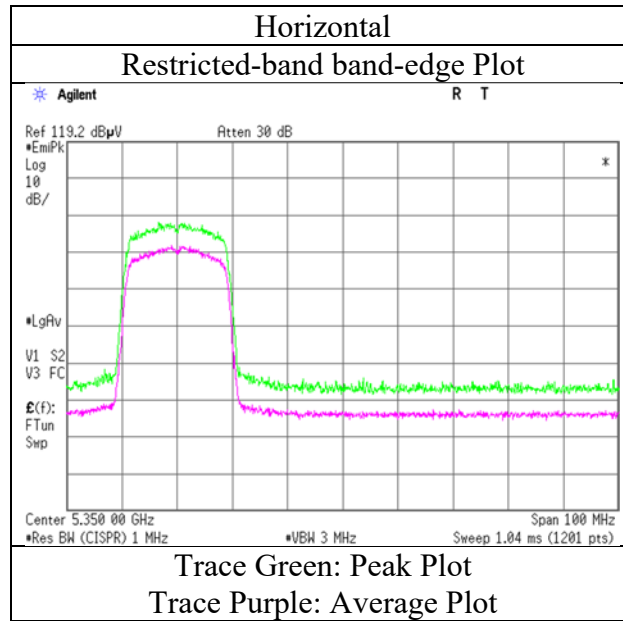
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz $20\log(4.45 \text{ m} / 3.0 \text{ m}) = 3.43 \text{ dB}$
 10 GHz - 40 GHz $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
Mode	Tx 11ac-20 5320 MHz



* Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5500 MHz			

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	5460.000	PK	43.0	32.0	7.5	31.3	-	51.2	73.9	22.7	
Hori	5470.000	PK	44.7	32.0	7.5	31.3	-	52.9	68.2	15.3	
Hori	11160.000	PK	42.3	40.4	-3.2	33.3	-	46.2	73.9	27.7	Floor noise
Hori	16740.000	PK	44.0	40.0	-1.4	32.6	-	50.0	73.9	23.9	Floor noise
Hori	5460.000	AV	33.5	32.0	7.5	31.3	-	41.7	53.9	12.2	
Hori	11160.000	AV	33.7	40.4	-3.2	33.3	-	37.6	53.9	16.3	Floor noise
Hori	16740.000	AV	34.6	40.0	-1.4	32.6	-	40.6	53.9	13.3	Floor noise
Vert	5460.000	PK	43.7	32.0	7.5	31.3	-	51.9	73.9	22.0	
Vert	5470.000	PK	45.2	32.0	7.5	31.3	-	53.4	68.2	14.8	
Vert	11160.000	PK	42.5	40.4	-3.2	33.3	-	46.4	73.9	27.5	Floor noise
Vert	16740.000	PK	43.8	40.0	-1.4	32.6	-	49.8	73.9	24.1	Floor noise
Vert	5460.000	AV	33.6	32.0	7.5	31.3	-	41.8	53.9	12.1	
Vert	11160.000	AV	33.8	40.4	-3.2	33.3	-	37.7	53.9	16.2	Floor noise
Vert	16740.000	AV	34.7	40.0	-1.4	32.6	-	40.7	53.9	13.2	Floor noise

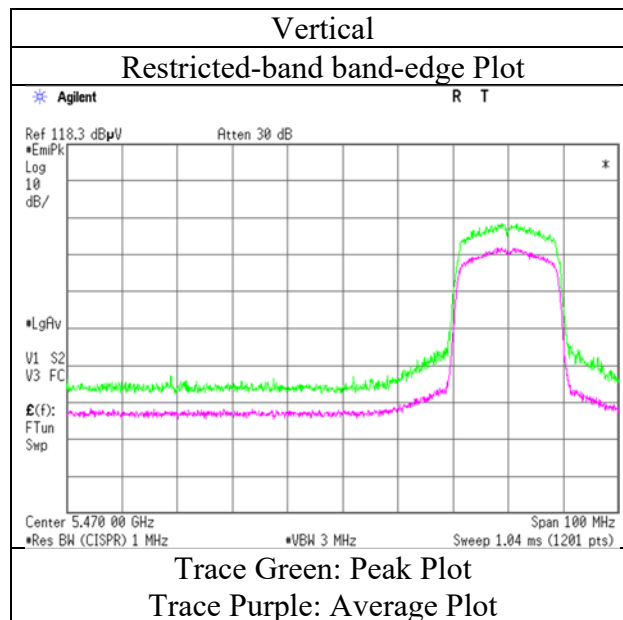
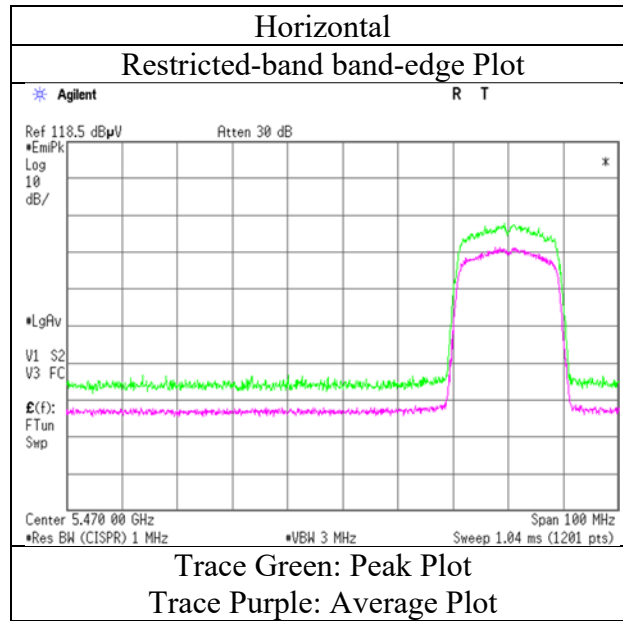
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
Mode	Tx 11ac-20 5500 MHz



* Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Ise EMC Lab.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5580 MHz			

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	11160.000	PK	42.3	40.4	-3.2	33.3	-	46.2	73.9	27.7	Floor noise
Hori	16740.000	PK	44.0	40.0	-1.4	32.6	-	50.0	73.9	23.9	Floor noise
Hori	11160.000	AV	33.7	40.4	-3.2	33.3	-	37.6	53.9	16.3	Floor noise
Hori	16740.000	AV	34.6	40.0	-1.4	32.6	-	40.6	53.9	13.3	Floor noise
Vert	11160.000	PK	42.5	40.4	-3.2	33.3	-	46.4	73.9	27.5	Floor noise
Vert	16740.000	PK	43.8	40.0	-1.4	32.6	-	49.8	73.9	24.1	Floor noise
Vert	11160.000	AV	33.8	40.4	-3.2	33.3	-	37.7	53.9	16.2	Floor noise
Vert	16740.000	AV	34.7	40.0	-1.4	32.6	-	40.7	53.9	13.2	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No. 12079941H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.3 No.3 No.3 No.3 No.3
Date January 30, 2018 January 31, 2018 February 1, 2018 February 3, 2018 February 6, 2018
Temperature / Humidity 23 deg. C / 31 % RH 22deg. C / 28 % RH 23 deg. C / 28 % RH 23 deg. C / 33 % RH 22 deg. C / 29 % RH
Engineer Ken Fujita Ken Fujita Tomoki Matsui Ken Fujita Takafumi Noguchi
(10 GHz - 18 GHz) (1 GHz - 10 GHz) (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz) (Below 1 GHz)
Mode Tx 11ac-20 5700 MHz

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	50.143	QP	22.3	10.6	7.5	32.2	-	8.2	40.0	31.8	
Hori	96.571	QP	23.2	9.5	8.1	32.2	-	8.6	43.5	34.9	
Hori	133.717	QP	28.7	13.9	8.6	32.1	-	19.1	43.5	24.4	
Hori	178.286	QP	27.8	16.3	9.0	32.1	-	21.0	43.5	22.5	
Hori	215.429	QP	34.6	11.3	9.3	32.1	-	23.1	43.5	20.4	
Hori	341.717	QP	27.5	14.3	10.3	32.0	-	20.1	46.0	25.9	
Hori	5725.000	PK	46.3	32.3	7.6	31.4	-	54.8	73.9	19.1	
Hori	11400.000	PK	42.8	40.1	-2.2	33.3	-	47.4	73.9	26.5	Floor noise
Hori	17100.000	PK	44.1	41.4	0.1	32.5	-	53.1	73.9	20.8	Floor noise
Hori	5725.000	AV	35.9	32.3	7.6	31.4	-	44.4	53.9	9.5	
Hori	11400.000	AV	33.4	40.1	-2.2	33.3	-	38.0	53.9	15.9	Floor noise
Hori	17100.000	AV	35.4	41.4	0.1	32.5	-	44.4	53.9	9.5	Floor noise
Vert	50.143	QP	28.5	10.6	7.5	32.2	-	14.4	40.0	25.6	
Vert	96.571	QP	29.3	9.5	8.1	32.2	-	14.7	43.5	28.8	
Vert	133.717	QP	32.0	13.9	8.6	32.1	-	22.4	43.5	21.1	
Vert	178.286	QP	31.2	16.3	9.0	32.1	-	24.4	43.5	19.1	
Vert	215.429	QP	29.6	11.3	9.3	32.1	-	18.1	43.5	25.4	
Vert	341.717	QP	28.4	14.3	10.3	32.0	-	21.0	46.0	25.0	
Vert	5725.000	PK	47.0	32.3	7.6	31.4	-	55.5	73.9	18.4	
Vert	11400.000	PK	42.4	40.1	-2.2	33.3	-	47.0	73.9	26.9	Floor noise
Vert	17100.000	PK	44.5	41.4	0.1	32.5	-	53.5	73.9	20.4	Floor noise
Vert	5725.000	AV	36.9	32.3	7.6	31.4	-	45.4	53.9	8.5	
Vert	11400.000	AV	33.8	40.1	-2.2	33.3	-	38.4	53.9	15.5	Floor noise
Vert	17100.000	AV	35.7	41.4	0.1	32.5	-	44.7	53.9	9.2	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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Ise EMC Lab.

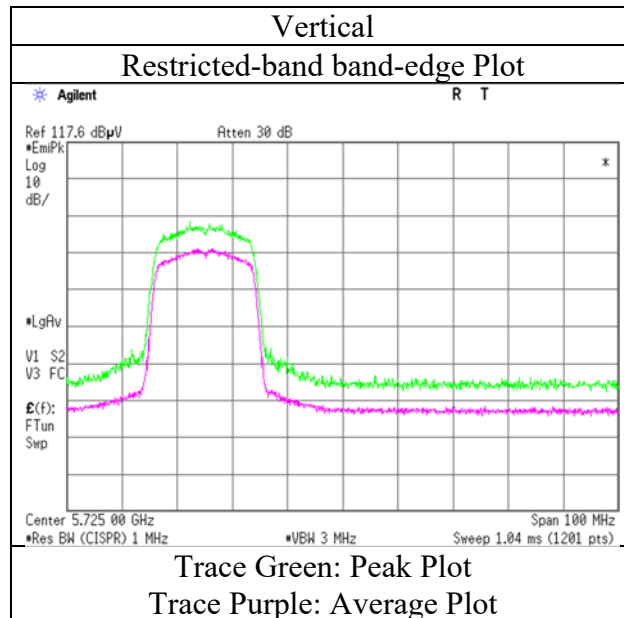
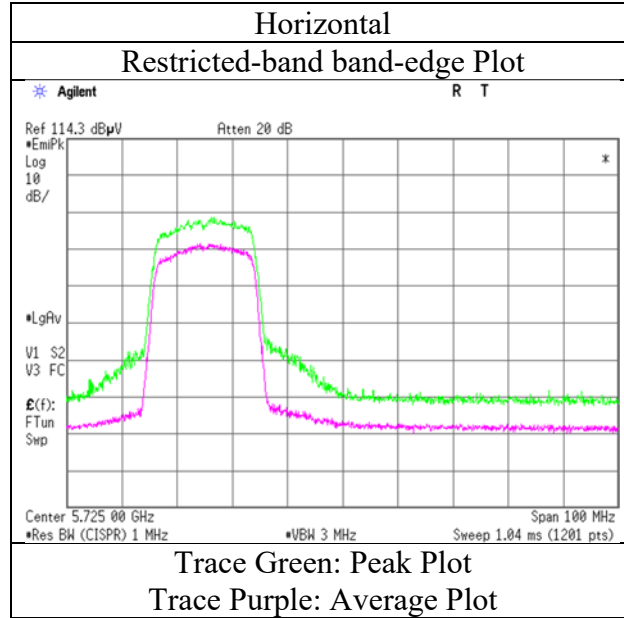
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Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
Mode	Tx 11ac-20 5700 MHz



* Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5745 MHz			

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	5650.000	PK	42.0	32.2	7.6	31.4	-	50.4	68.2	17.8	
Hori	5700.000	PK	42.4	32.3	7.6	31.4	-	50.9	105.2	54.3	
Hori	5720.000	PK	50.2	32.3	7.6	31.4	-	58.7	110.8	52.1	
Hori	5725.000	PK	60.4	32.3	7.6	31.4	-	68.9	122.2	53.3	
Hori	11490.000	PK	42.2	40.1	-2.1	33.3	-	46.9	73.9	27.0	Floor noise
Hori	17235.000	PK	44.1	42.2	0.0	32.5	-	53.8	73.9	20.1	Floor noise
Hori	11490.000	AV	33.5	40.1	-2.1	33.3	-	38.2	53.9	15.7	Floor noise
Hori	17235.000	AV	35.2	42.2	0.0	32.5	-	44.9	53.9	9.0	Floor noise
Vert	5650.000	PK	43.0	32.2	7.6	31.4	-	51.4	68.2	16.8	
Vert	5700.000	PK	42.8	32.3	7.6	31.4	-	51.3	105.2	53.9	
Vert	5720.000	PK	46.3	32.3	7.6	31.4	-	54.8	110.8	56.0	
Vert	5725.000	PK	53.1	32.3	7.6	31.4	-	61.6	122.2	60.6	
Vert	11490.000	PK	42.3	40.1	-2.1	33.3	-	47.0	73.9	26.9	Floor noise
Vert	17235.000	PK	44.4	42.2	0.0	32.5	-	54.1	73.9	19.8	Floor noise
Vert	11490.000	AV	33.4	40.1	-2.1	33.3	-	38.1	53.9	15.8	Floor noise
Vert	17235.000	AV	35.1	42.2	0.0	32.5	-	44.8	53.9	9.1	Floor noise

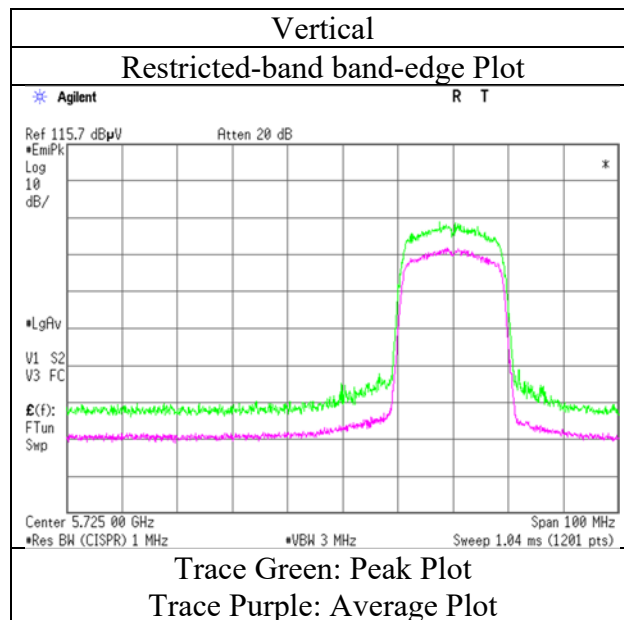
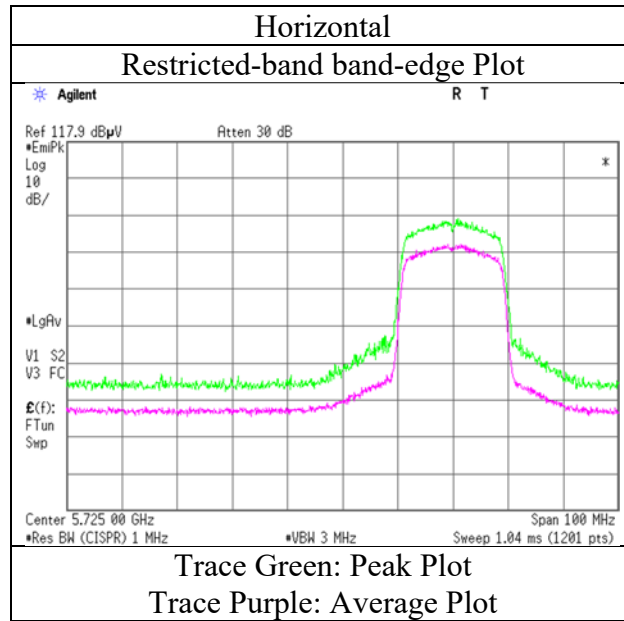
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
Mode	Tx 11ac-20 5745 MHz



* Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5785 MHz			

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	11570.000	PK	42.8	40.0	-2.0	33.3	-	47.5	73.9	26.4	Floor noise
Hori	17355.000	PK	43.9	42.9	0.1	32.5	-	54.4	73.9	19.5	Floor noise
Hori	11570.000	AV	33.6	40.0	-2.0	33.3	-	38.3	53.9	15.6	Floor noise
Hori	17355.000	AV	35.0	42.9	0.1	32.5	-	45.5	53.9	8.4	Floor noise
Vert	11570.000	PK	42.7	40.0	-2.0	33.3	-	47.4	73.9	26.5	Floor noise
Vert	17355.000	PK	43.4	42.9	0.1	32.5	-	53.9	73.9	20.0	Floor noise
Vert	11570.000	AV	33.3	40.0	-2.0	33.3	-	38.0	53.9	15.9	Floor noise
Vert	17355.000	AV	35.2	42.9	0.1	32.5	-	45.7	53.9	8.2	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz $20\log(4.45 \text{ m} / 3.0 \text{ m}) = 3.43 \text{ dB}$
 10 GHz - 40 GHz $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5825 MHz			

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	48.7	32.5	7.6	31.4	-	57.4	122.2	64.8	
Hori	5855.000	PK	45.3	32.5	7.6	31.4	-	54.0	110.8	56.8	
Hori	5875.000	PK	42.6	32.5	7.6	31.4	-	51.3	105.2	53.9	
Hori	5925.000	PK	41.1	32.6	7.7	31.4	-	50.0	68.2	18.2	
Hori	11650.000	PK	42.9	39.9	-1.1	33.3	-	48.4	73.9	25.5	Floor noise
Hori	17475.000	PK	43.2	43.6	0.3	32.5	-	54.6	73.9	19.3	Floor noise
Hori	11650.000	AV	33.9	39.9	-1.1	33.3	-	39.4	53.9	14.5	Floor noise
Hori	17475.000	AV	34.3	43.6	-1.1	32.5	-	44.3	53.9	9.6	Floor noise
Vert	5850.000	PK	46.3	32.5	7.6	31.4	-	55.0	122.2	67.2	
Vert	5855.000	PK	43.8	32.5	7.6	31.4	-	52.5	110.8	58.3	
Vert	5875.000	PK	41.5	32.5	7.6	31.4	-	50.2	105.2	55.0	
Vert	5925.000	PK	41.3	32.6	7.7	31.4	-	50.2	68.2	18.0	
Vert	11650.000	PK	42.7	39.9	-1.1	33.3	-	48.2	73.9	25.7	Floor noise
Vert	17475.000	PK	43.5	43.6	-1.1	32.5	-	53.5	73.9	20.4	Floor noise
Vert	11650.000	AV	34.0	39.9	-1.1	33.3	-	39.5	53.9	14.4	Floor noise
Vert	17475.000	AV	34.7	43.6	-1.1	32.5	-	44.7	53.9	9.2	Floor noise

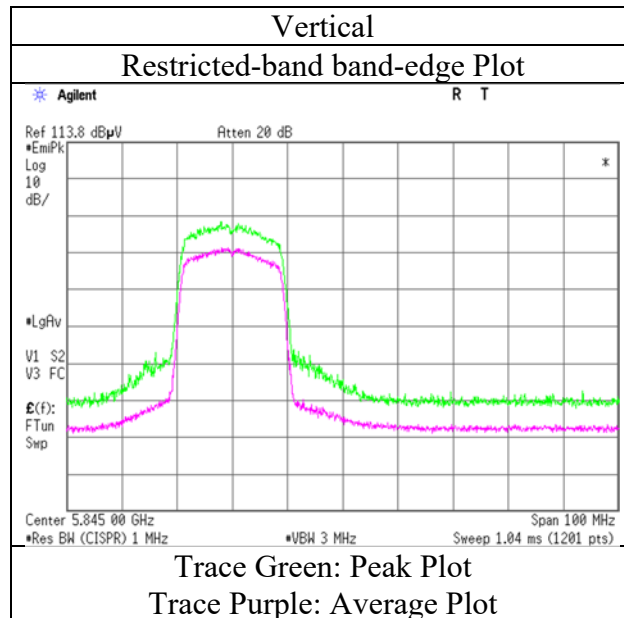
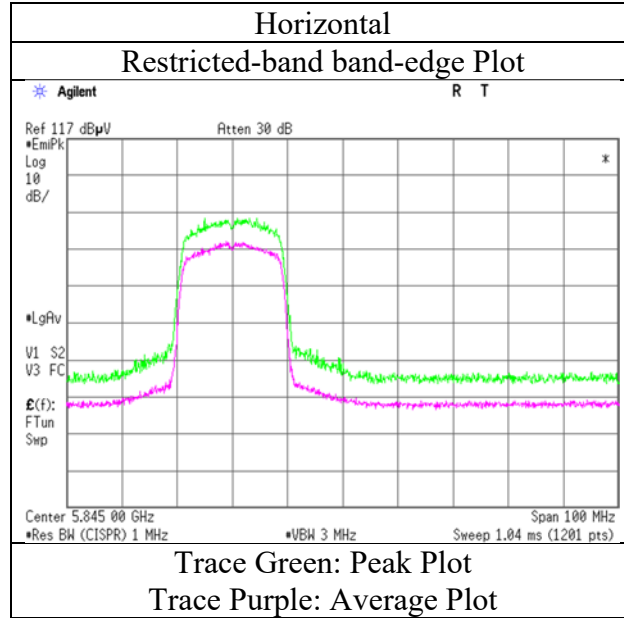
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
Mode	Tx 11ac-20 5825 MHz



* Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5190 MHz			

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	43.2	32.2	7.3	31.3	-	51.4	73.9	22.5	
Hori	10380.000	PK	43.4	39.5	-2.4	33.2	-	47.3	73.9	26.6	Floor noise
Hori	15570.000	PK	44.5	38.9	-0.3	32.6	-	50.5	73.9	23.4	Floor noise
Hori	5150.000	AV	34.9	32.2	7.3	31.3	-	43.1	53.9	10.8	
Hori	10380.000	AV	33.5	39.5	-2.4	33.2	-	37.4	53.9	16.5	Floor noise
Hori	15570.000	AV	35.4	38.9	-0.3	32.6	-	41.4	53.9	12.5	Floor noise
Vert	5150.000	PK	43.7	32.2	7.3	31.3	-	51.9	73.9	22.0	
Vert	10380.000	PK	42.6	39.5	-2.4	33.2	-	46.5	73.9	27.4	Floor noise
Vert	15570.000	PK	44.5	38.9	-0.3	32.6	-	50.5	73.9	23.4	Floor noise
Vert	5150.000	AV	34.5	32.2	7.3	31.3	-	42.7	53.9	11.2	
Vert	10380.000	AV	33.7	39.5	-2.4	33.2	-	37.6	53.9	16.3	Floor noise
Vert	15570.000	AV	35.5	38.9	-0.3	32.6	-	41.5	53.9	12.4	Floor noise

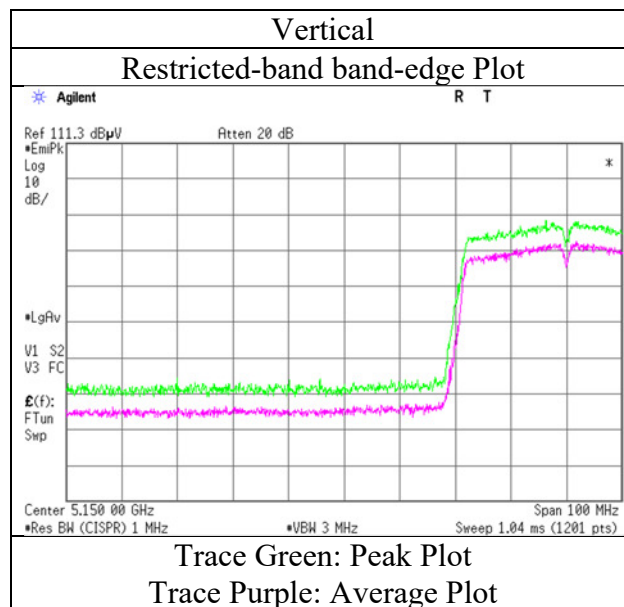
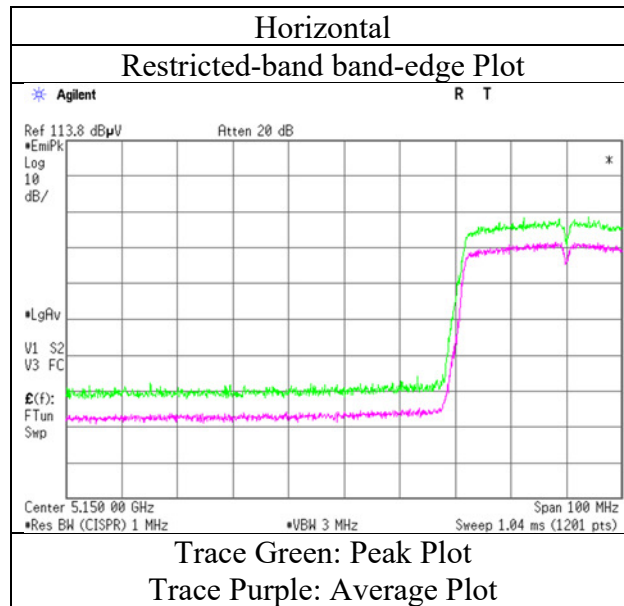
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz $20\log(4.45 \text{ m} / 3.0 \text{ m}) = 3.43 \text{ dB}$
 10 GHz - 40 GHz $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5190 MHz



* Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5270 MHz			

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	42.5	39.8	-2.4	33.2	-	46.7	73.9	27.2	Floor noise
Hori	15810.000	PK	43.4	38.3	-0.2	32.6	-	48.9	73.9	25.0	Floor noise
Hori	10540.000	AV	33.6	39.8	-2.4	33.2	-	37.8	53.9	16.1	Floor noise
Hori	15810.000	AV	35.1	38.3	-0.2	32.6	-	40.6	53.9	13.3	Floor noise
Vert	10540.000	PK	42.4	39.8	-2.4	33.2	-	46.6	73.9	27.3	Floor noise
Vert	15810.000	PK	43.3	38.3	-0.2	32.6	-	48.8	73.9	25.1	Floor noise
Vert	10540.000	AV	33.3	39.8	-2.4	33.2	-	37.5	53.9	16.4	Floor noise
Vert	15810.000	AV	35.0	38.3	-0.2	32.6	-	40.5	53.9	13.4	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz $20\log(4.45 \text{ m} / 3.0 \text{ m}) = 3.43 \text{ dB}$
 10 GHz - 40 GHz $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

UL Japan, Inc.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
Mode	(10 GHz - 18 GHz) Tx 11ac-40 5310 MHz	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)

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	48.2	32.1	7.4	31.3	-	56.4	73.9	17.5	
Hori	10620.000	PK	42.4	39.9	-2.4	33.2	-	46.7	73.9	27.2	Floor noise
Hori	15930.000	PK	43.4	37.9	-0.1	32.6	-	48.6	73.9	25.3	Floor noise
Hori	5350.000	AV	37.6	32.1	7.4	31.3	-	45.8	53.9	8.1	
Hori	10620.000	AV	33.3	39.9	-2.4	33.2	-	37.6	53.9	16.3	Floor noise
Hori	15930.000	AV	34.2	37.9	-0.1	32.6	-	39.4	53.9	14.5	Floor noise
Vert	5350.000	PK	48.4	32.1	7.4	31.3	-	56.6	73.9	17.3	
Vert	10620.000	PK	42.5	39.9	-2.4	33.2	-	46.8	73.9	27.1	Floor noise
Vert	15930.000	PK	43.4	37.9	-0.1	32.6	-	48.6	73.9	25.3	Floor noise
Vert	5350.000	AV	37.6	32.1	7.4	31.3	-	45.8	53.9	8.1	
Vert	10620.000	AV	33.4	39.9	-2.4	33.2	-	37.7	53.9	16.2	Floor noise
Vert	15930.000	AV	34.6	37.9	-0.1	32.6	-	39.8	53.9	14.1	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz $20\log(4.45 \text{ m} / 3.0 \text{ m}) = 3.43 \text{ dB}$
 10 GHz - 40 GHz $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

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Ise EMC Lab.

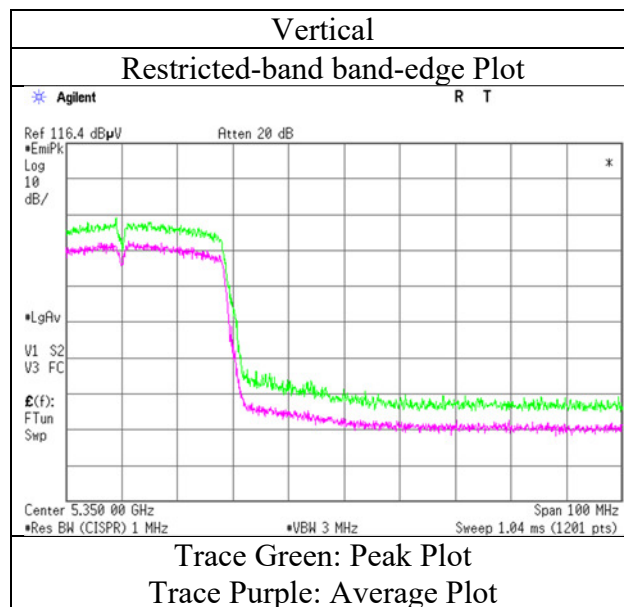
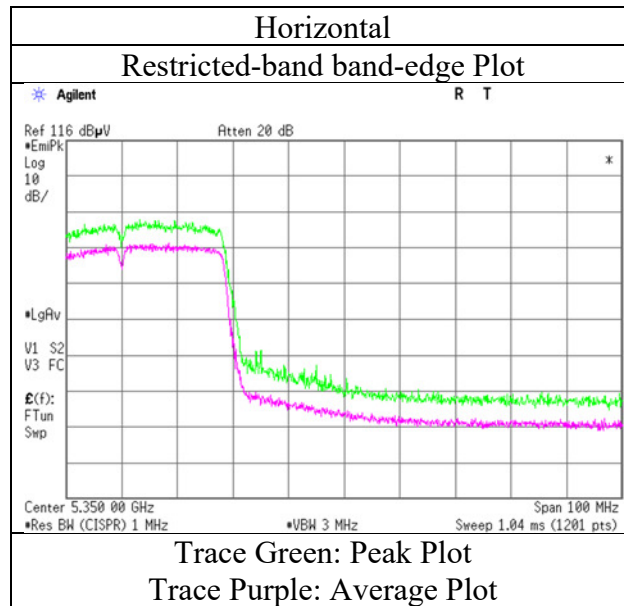
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5310 MHz



* Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5510 MHz			

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	5460.000	PK	47.2	32.0	7.5	31.3	-	55.4	73.9	18.5	
Hori	5470.000	PK	52.6	32.0	7.5	31.3	-	60.8	68.2	7.4	
Hori	11020.000	PK	42.3	40.5	-2.4	33.3	-	47.1	73.9	26.8	Floor noise
Hori	16530.000	PK	44.4	39.4	0.0	32.6	-	51.2	73.9	22.7	Floor noise
Hori	5460.000	AV	36.1	32.0	7.5	31.3	-	44.3	53.9	9.6	
Hori	11020.000	AV	33.6	40.5	-2.4	33.3	-	38.4	53.9	15.5	Floor noise
Hori	16530.000	AV	35.6	39.4	0.0	32.6	-	42.4	53.9	11.5	Floor noise
Vert	5460.000	PK	45.0	32.0	7.5	31.3	-	53.2	73.9	20.7	
Vert	5470.000	PK	50.6	32.0	7.5	31.3	-	58.8	68.2	9.4	
Vert	11020.000	PK	42.4	40.5	-2.4	33.3	-	47.2	73.9	26.7	Floor noise
Vert	16530.000	PK	44.4	39.4	0.0	32.6	-	51.2	73.9	22.7	Floor noise
Vert	5460.000	AV	35.6	32.0	7.5	31.3	-	43.8	53.9	10.1	
Vert	11020.000	AV	34.1	40.5	-2.4	33.3	-	38.9	53.9	15.0	Floor noise
Vert	16530.000	AV	35.4	39.4	0.0	32.6	-	42.2	53.9	11.7	Floor noise

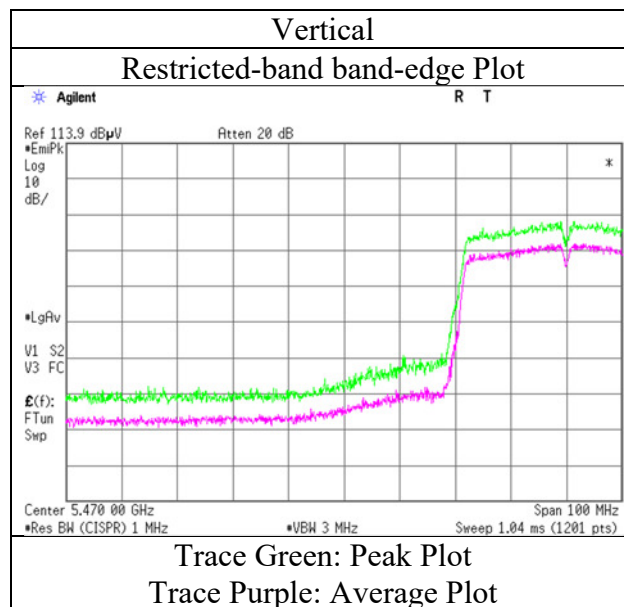
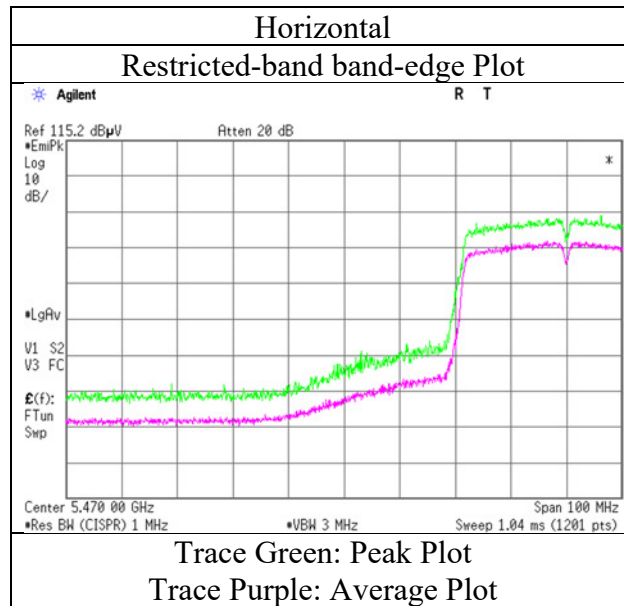
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5510 MHz



* Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5550 MHz			

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	11100.000	PK	43.0	40.4	-2.4	33.3	-	47.7	73.9	26.2	Floor noise
Hori	16650.000	PK	44.0	39.8	0.0	32.6	-	51.2	73.9	22.7	Floor noise
Hori	11100.000	AV	34.1	40.4	-2.4	33.3	-	38.8	53.9	15.1	Floor noise
Hori	16650.000	AV	35.2	39.8	0.0	32.6	-	42.4	53.9	11.5	Floor noise
Vert	11100.000	PK	43.0	40.4	-2.4	33.3	-	47.7	73.9	26.2	Floor noise
Vert	16650.000	PK	44.1	39.8	0.0	32.6	-	51.3	73.9	22.6	Floor noise
Vert	11100.000	AV	34.1	40.4	-2.4	33.3	-	38.8	53.9	15.1	Floor noise
Vert	16650.000	AV	35.3	39.8	0.0	32.6	-	42.5	53.9	11.4	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5670 MHz			

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	43.5	32.3	7.6	31.4	-	52.0	68.2	16.2	
Hori	11340.000	PK	42.3	40.2	-2.2	33.3	-	47.0	73.9	26.9	Floor noise
Hori	17010.000	PK	44.0	40.9	0.1	32.6	-	52.4	73.9	21.5	Floor noise
Hori	11340.000	AV	33.3	40.2	-2.2	33.3	-	38.0	53.9	15.9	Floor noise
Hori	17010.000	AV	35.2	40.9	0.1	32.6	-	43.6	53.9	10.3	Floor noise
Vert	3780.000	PK	44.8	29.6	6.8	31.8	-	49.4	73.9	24.5	
Vert	5725.000	PK	43.2	32.3	7.6	31.4	-	51.7	68.2	16.5	
Vert	11340.000	PK	43.1	40.2	-2.2	33.3	-	47.8	73.9	26.1	Floor noise
Vert	17010.000	PK	44.1	40.9	0.1	32.6	-	52.5	73.9	21.4	Floor noise
Vert	3780.000	AV	39.0	29.6	6.8	31.8	-	43.6	53.9	10.3	
Vert	11340.000	AV	33.3	40.2	-2.2	33.3	-	38.0	53.9	15.9	Floor noise
Vert	17010.000	AV	35.1	40.9	0.1	32.6	-	43.5	53.9	10.4	Floor noise

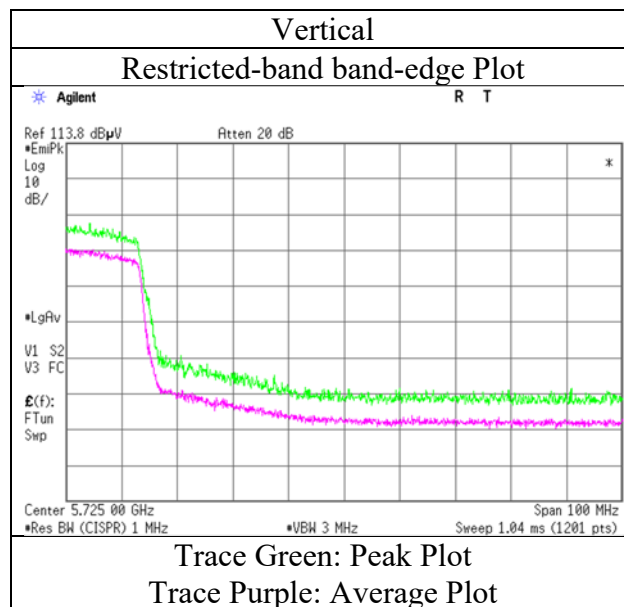
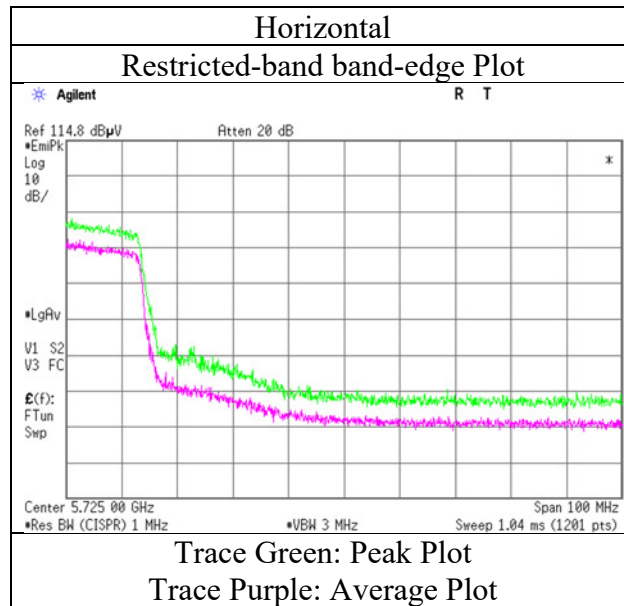
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5670 MHz



* Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5755 MHz			

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	5650.000	PK	41.2	32.2	7.6	31.4	-	49.6	68.2	18.6	
Hori	5700.000	PK	44.6	32.3	7.6	31.4	-	53.1	105.2	52.1	
Hori	5720.000	PK	54.9	32.3	7.6	31.4	-	63.4	110.8	47.4	
Hori	5725.000	PK	56.5	32.3	7.6	31.4	-	65.0	122.2	57.2	
Hori	11510.000	PK	42.4	40.0	-2.0	33.3	-	47.1	73.9	26.8	Floor noise
Hori	17265.000	PK	44.2	42.4	0.0	32.5	-	54.1	73.9	19.8	Floor noise
Hori	11510.000	AV	33.4	40.0	-2.0	33.3	-	38.1	53.9	15.8	Floor noise
Hori	17265.000	AV	35.4	42.4	0.0	32.5	-	45.3	53.9	8.6	Floor noise
Vert	3836.675	PK	44.6	29.7	6.8	31.8	-	49.3	73.9	24.6	
Vert	5650.000	PK	40.9	32.2	7.6	31.4	-	49.3	68.2	18.9	
Vert	5700.000	PK	44.6	32.3	7.6	31.4	-	53.1	105.2	52.1	
Vert	5720.000	PK	52.6	32.3	7.6	31.4	-	61.1	110.8	49.7	
Vert	5725.000	PK	53.7	32.3	7.6	31.4	-	62.2	122.2	60.0	
Vert	11510.000	PK	42.3	40.0	-2.0	33.3	-	47.0	73.9	26.9	Floor noise
Vert	17265.000	PK	44.1	42.4	0.0	32.5	-	54.0	73.9	19.9	Floor noise
Vert	3836.675	AV	39.4	29.7	6.8	31.8	-	44.1	53.9	9.8	
Vert	11510.000	AV	33.5	40.0	-2.0	33.3	-	38.2	53.9	15.7	Floor noise
Vert	17265.000	AV	35.1	42.4	0.0	32.5	-	45.0	53.9	8.9	Floor noise

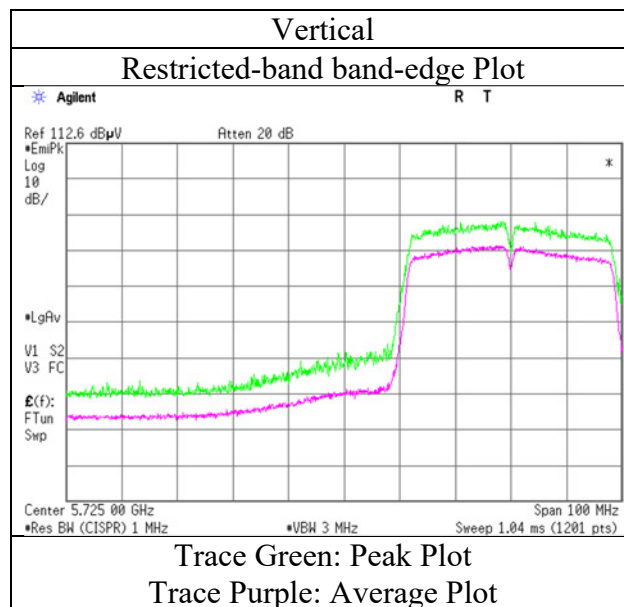
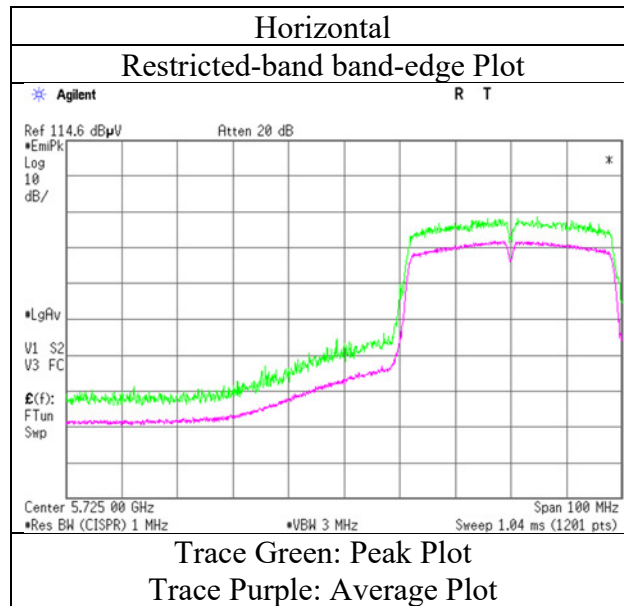
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5755 MHz



* Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5795 MHz			

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	44.6	32.5	7.6	31.4	-	53.3	122.2	68.9	
Hori	5855.000	PK	43.1	32.5	7.6	31.4	-	51.8	110.8	59.0	
Hori	5875.000	PK	42.9	32.5	7.6	31.4	-	51.6	105.2	53.6	
Hori	5925.000	PK	40.8	32.6	7.7	31.4	-	49.7	68.2	18.5	
Hori	11590.000	PK	43.0	40.0	-2.0	33.3	-	47.7	73.9	26.2	Floor noise
Hori	17385.000	PK	43.3	43.1	0.1	32.5	-	54.0	73.9	19.9	Floor noise
Hori	11590.000	AV	34.3	40.0	-2.0	33.3	-	39.0	53.9	14.9	Floor noise
Hori	17385.000	AV	34.5	43.1	0.1	32.5	-	45.2	53.9	8.7	Floor noise
Vert	3863.366	PK	46.3	29.7	6.8	31.7	-	51.1	73.9	22.8	
Vert	5850.000	PK	42.6	32.5	7.6	31.4	-	51.3	122.2	70.9	
Vert	5855.000	PK	42.1	32.5	7.6	31.4	-	50.8	110.8	60.0	
Vert	5875.000	PK	41.9	32.5	7.6	31.4	-	50.6	105.2	54.6	
Vert	5925.000	PK	41.3	32.6	7.7	31.4	-	50.2	68.2	18.0	
Vert	11590.000	PK	43.0	40.0	-2.0	33.3	-	47.7	73.9	26.2	Floor noise
Vert	17385.000	PK	43.3	43.1	0.1	32.5	-	54.0	73.9	19.9	Floor noise
Vert	3863.366	AV	40.6	29.7	6.8	31.7	-	45.4	53.9	8.5	
Vert	11590.000	AV	34.1	40.0	-2.0	33.3	-	38.8	53.9	15.1	Floor noise
Vert	17385.000	AV	34.4	43.1	0.1	32.5	-	45.1	53.9	8.8	Floor noise

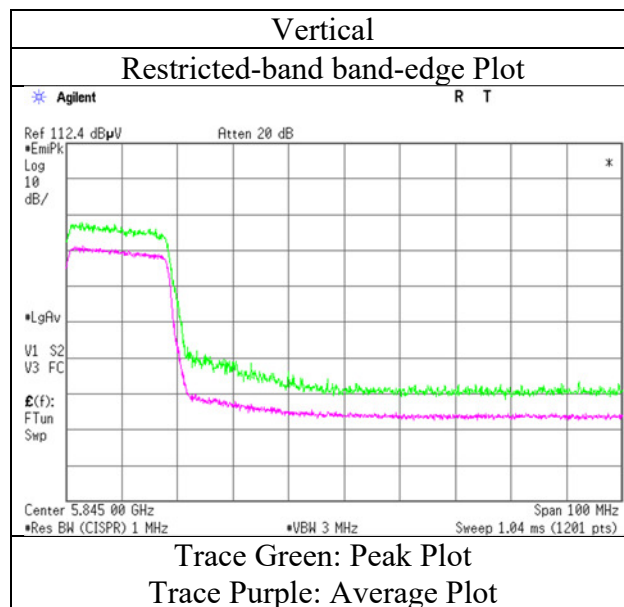
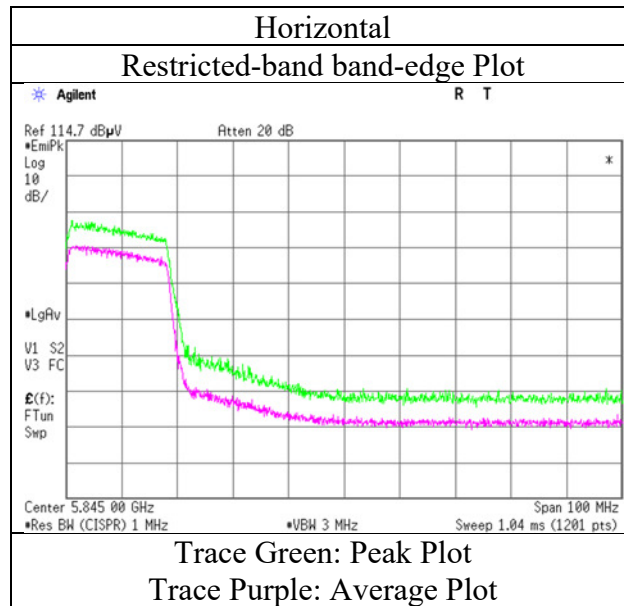
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5795 MHz



* Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5210 MHz			

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	5135.809	PK	46.7	32.2	7.3	31.3	-	54.9	73.9	19.0	
Hori	5150.000	PK	45.1	32.2	7.3	31.3	-	53.3	73.9	20.6	
Hori	10420.000	PK	43.5	39.6	-2.4	33.2	-	47.5	73.9	26.4	Floor noise
Hori	15630.000	PK	44.1	38.8	-0.3	32.6	-	50.0	73.9	23.9	Floor noise
Hori	5135.809	AV	37.2	32.2	7.3	31.3	-	45.4	53.9	8.5	
Hori	5150.000	AV	36.5	32.2	7.3	31.3	-	44.7	53.9	9.2	
Hori	10420.000	AV	34.0	39.6	-2.4	33.2	-	38.0	53.9	15.9	Floor noise
Hori	15630.000	AV	34.5	38.8	-0.3	32.6	-	40.4	53.9	13.5	Floor noise
Vert	5150.000	PK	43.5	32.2	7.3	31.3	-	51.7	73.9	22.2	
Vert	10420.000	PK	43.4	39.6	-2.4	33.2	-	47.4	73.9	26.5	Floor noise
Vert	15630.000	PK	44.3	38.8	-0.3	32.6	-	50.2	73.9	23.7	Floor noise
Vert	5150.000	AV	34.8	32.2	7.3	31.3	-	43.0	53.9	10.9	
Vert	10420.000	AV	34.1	39.6	-2.4	33.2	-	38.1	53.9	15.8	Floor noise
Vert	15630.000	AV	34.8	38.8	-0.3	32.6	-	40.7	53.9	13.2	Floor noise

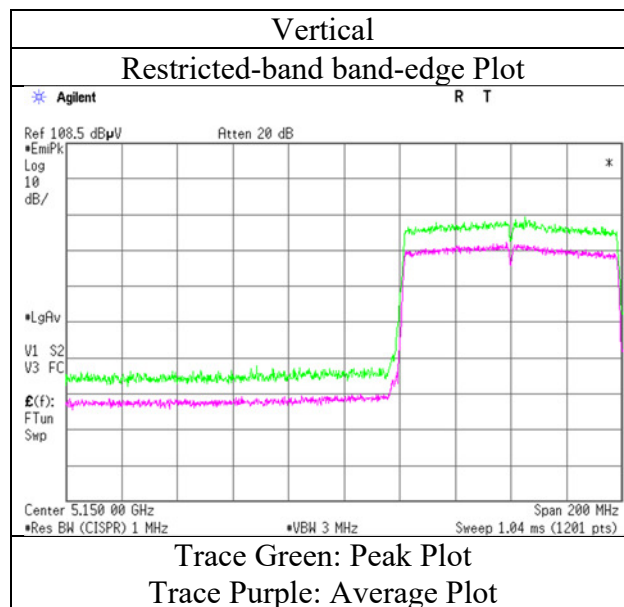
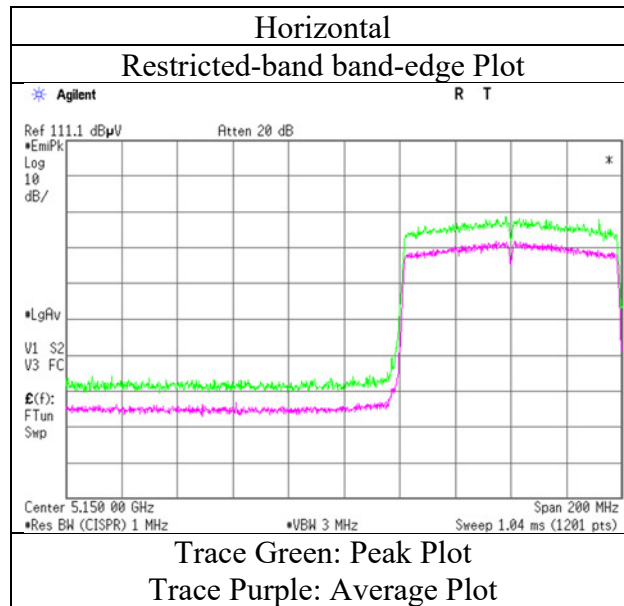
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz $20\log(4.45 \text{ m} / 3.0 \text{ m}) = 3.43 \text{ dB}$
 10 GHz - 40 GHz $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

Radiated Spurious Emission

Report No. 12079941H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.3
Date January 31, 2018
Temperature / Humidity 22deg. C / 28 % RH
Engineer Ken Fujita
(1 GHz - 10 GHz)
Mode Tx 11ac-80 5210 MHz



* Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5290 MHz			

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	49.3	32.1	7.4	31.3	-	57.5	73.9	16.4	
Hori	10580.000	PK	42.9	39.8	-2.4	33.2	-	47.1	73.9	26.8	Floor noise
Hori	15870.000	PK	43.7	38.1	-0.1	32.6	-	49.1	73.9	24.8	Floor noise
Hori	5350.000	AV	39.4	32.1	7.4	31.3	-	47.6	53.9	6.3	
Hori	10580.000	AV	33.3	39.8	-2.4	33.2	-	37.5	53.9	16.4	Floor noise
Hori	15870.000	AV	34.9	38.1	-0.1	32.6	-	40.3	53.9	13.6	Floor noise
Vert	5350.000	PK	47.9	32.1	7.4	31.3	-	56.1	73.9	17.8	
Vert	10580.000	PK	42.3	39.8	-2.4	33.2	-	46.5	73.9	27.4	Floor noise
Vert	15870.000	PK	43.4	38.1	-0.1	32.6	-	48.8	73.9	25.1	Floor noise
Vert	5350.000	AV	38.1	32.1	7.4	31.3	-	46.3	53.9	7.6	
Vert	10580.000	AV	33.6	39.8	-2.4	33.2	-	37.8	53.9	16.1	Floor noise
Vert	15870.000	AV	34.5	38.1	-0.1	32.6	-	39.9	53.9	14.0	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz $20\log(4.45 \text{ m} / 3.0 \text{ m}) = 3.43 \text{ dB}$
 10 GHz - 40 GHz $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

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Ise EMC Lab.

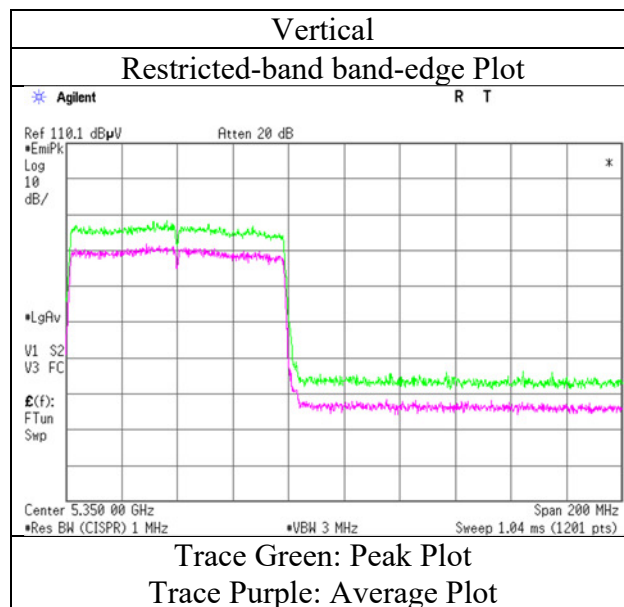
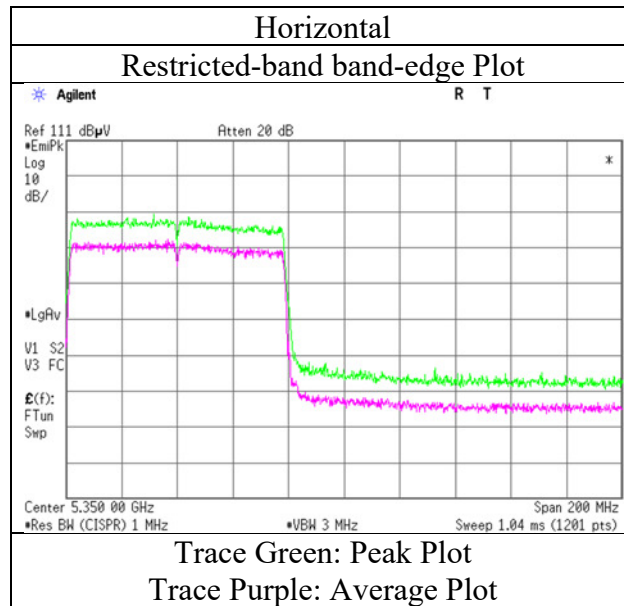
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Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5290 MHz



* Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Facsimile : +81 596 24 8124

Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5530 MHz			

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	5460.000	PK	51.4	32.0	7.5	31.3	-	59.6	73.9	14.3	
Hori	5470.000	PK	53.0	32.0	7.5	31.3	-	61.2	68.2	7.0	
Hori	11060.000	PK	42.8	40.5	-2.4	33.3	-	47.6	73.9	26.3	Floor noise
Hori	16590.000	PK	44.7	39.6	0.0	32.6	-	51.7	73.9	22.2	Floor noise
Hori	5460.000	AV	41.0	32.0	7.5	31.3	-	49.2	53.9	4.7	
Hori	11060.000	AV	34.2	40.5	-2.4	33.3	-	39.0	53.9	14.9	Floor noise
Hori	16590.000	AV	35.3	39.6	0.0	32.6	-	42.3	53.9	11.6	Floor noise
Vert	5460.000	PK	51.8	32.0	7.5	31.3	-	60.0	73.9	13.9	
Vert	5470.000	PK	52.8	32.0	7.5	31.3	-	61.0	68.2	7.2	
Vert	11060.000	PK	42.3	40.5	-2.4	33.3	-	47.1	73.9	26.8	Floor noise
Vert	16590.000	PK	44.6	39.6	0.0	32.6	-	51.6	73.9	22.3	Floor noise
Vert	5460.000	AV	41.6	32.0	7.5	31.3	-	49.8	53.9	4.1	
Vert	11060.000	AV	34.1	40.5	-2.4	33.3	-	38.9	53.9	15.0	Floor noise
Vert	16590.000	AV	35.3	39.6	0.0	32.6	-	42.3	53.9	11.6	Floor noise

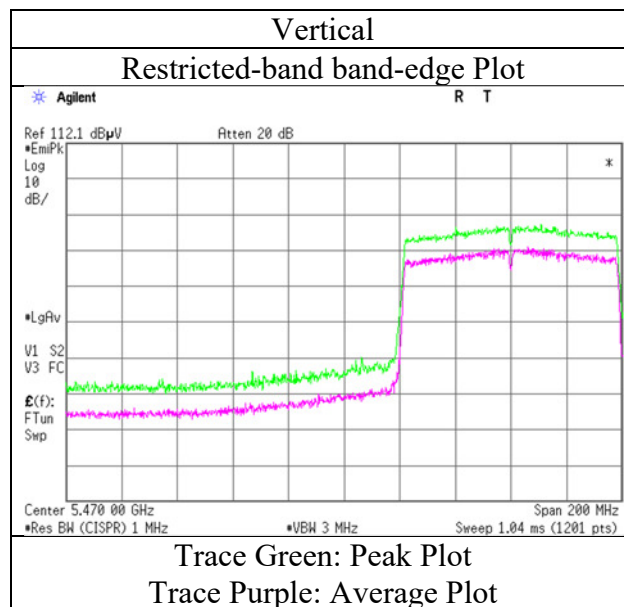
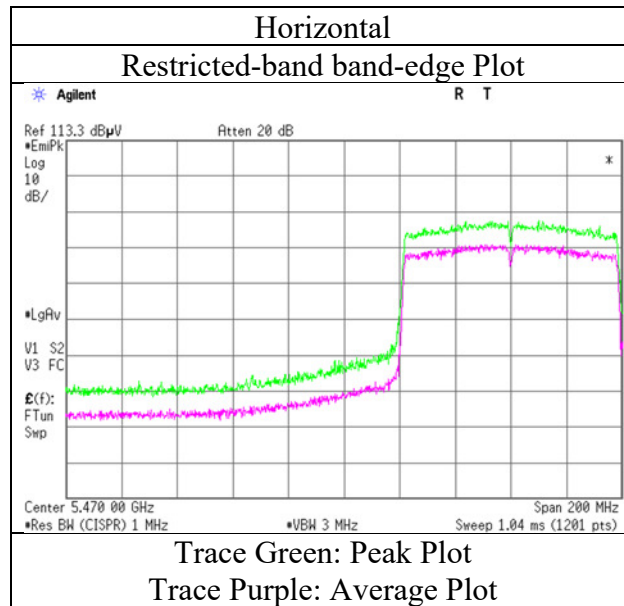
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5530 MHz



* Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Ise EMC Lab.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5610 MHz			

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	43.1	32.3	7.6	31.4	-	51.6	68.2	16.6	
Hori	11220.000	PK	43.2	40.3	-2.3	33.3	-	47.9	73.9	26.0	Floor noise
Hori	16830.000	PK	44.1	40.3	0.1	32.6	-	51.9	73.9	22.0	Floor noise
Hori	11220.000	AV	34.1	40.3	-2.3	33.3	-	38.8	53.9	15.1	Floor noise
Hori	16830.000	AV	34.4	40.3	0.1	32.6	-	42.2	53.9	11.7	Floor noise
Vert	3740.000	PK	43.8	29.6	6.8	31.8	-	48.4	73.9	25.5	
Vert	5725.000	PK	43.2	32.3	7.6	31.4	-	51.7	68.2	16.5	
Vert	11220.000	PK	43.1	40.3	-2.3	33.3	-	47.8	73.9	26.1	Floor noise
Vert	16830.000	PK	44.1	40.3	0.1	32.6	-	51.9	73.9	22.0	Floor noise
Vert	3740.000	AV	37.2	29.6	6.8	31.8	-	41.8	53.9	12.1	
Vert	11220.000	AV	33.9	40.3	-2.3	33.3	-	38.6	53.9	15.3	Floor noise
Vert	16830.000	AV	34.3	40.3	0.1	32.6	-	42.1	53.9	11.8	Floor noise

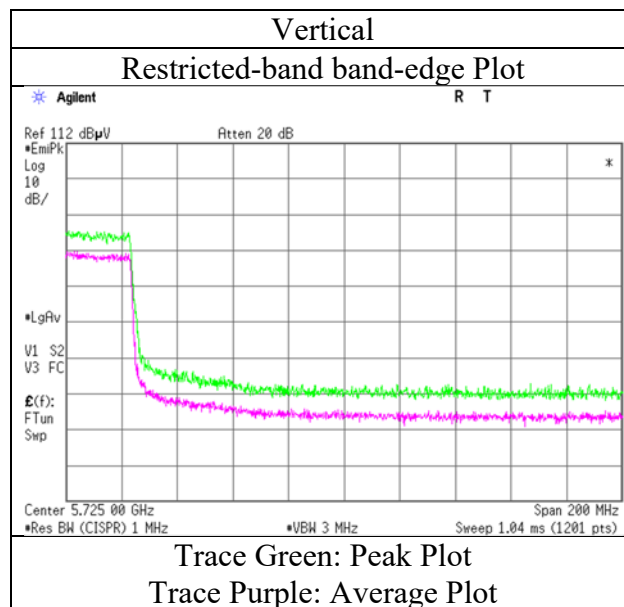
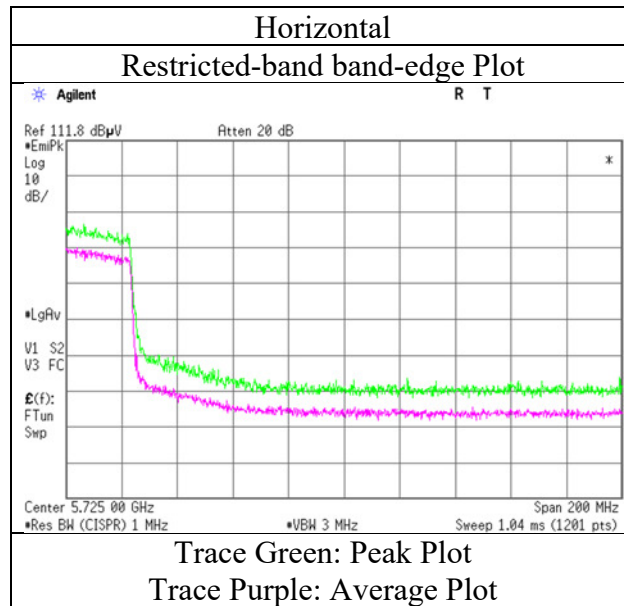
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz $20\log(4.45 \text{ m} / 3.0 \text{ m}) = 3.43 \text{ dB}$
 10 GHz - 40 GHz $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5610 MHz



* Final result of restricted band edge was shown in tabular data.

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Ise EMC Lab.

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Radiated Spurious Emission

Report No.	12079941H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 30, 2018	January 31, 2018	February 1, 2018	February 3, 2018
Temperature / Humidity	23 deg. C / 31 % RH	22deg. C / 28 % RH	23 deg. C / 28 % RH	23 deg. C / 33 % RH
Engineer	Ken Fujita	Ken Fujita	Tomoki Matsui	Ken Fujita
	(10 GHz - 18 GHz)	(1 GHz - 10 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5775 MHz			

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	5650.000	PK	41.4	32.2	7.6	31.4	-	49.8	68.2	18.4	
Hori	5700.000	PK	50.4	32.3	7.6	31.4	-	58.9	105.2	46.3	
Hori	5720.000	PK	54.2	32.3	7.6	31.4	-	62.7	110.8	48.1	
Hori	5725.000	PK	55.3	32.3	7.6	31.4	-	63.8	122.2	58.4	
Hori	5850.000	PK	46.2	32.5	7.6	31.4	-	54.9	122.2	67.3	
Hori	5855.000	PK	44.6	32.5	7.6	31.4	-	53.3	110.8	57.5	
Hori	5875.000	PK	41.9	32.5	7.6	31.4	-	50.6	105.2	54.6	
Hori	5925.000	PK	41.0	32.6	7.7	31.4	-	49.9	68.2	18.3	
Hori	11550.000	PK	42.3	40.0	-2.0	33.3	-	47.0	73.9	26.9	Floor noise
Hori	17325.000	PK	44.0	42.7	0.1	32.5	-	54.3	73.9	19.6	Floor noise
Hori	11550.000	AV	33.4	40.0	-2.0	33.3	-	38.1	53.9	15.8	Floor noise
Hori	17325.000	AV	35.2	42.7	0.1	32.5	-	45.5	53.9	8.4	Floor noise
Vert	3850.000	PK	45.5	29.7	6.8	31.7	-	50.3	73.9	23.6	
Vert	5650.000	PK	41.4	32.2	7.6	31.4	-	49.8	68.2	18.4	
Vert	5700.000	PK	50.1	32.3	7.6	31.4	-	58.6	105.2	46.6	
Vert	5720.000	PK	53.3	32.3	7.6	31.4	-	61.8	110.8	49.0	
Vert	5725.000	PK	54.7	32.3	7.6	31.4	-	63.2	122.2	59.0	
Vert	5850.000	PK	48.0	32.5	7.6	31.4	-	56.7	122.2	65.5	
Vert	5855.000	PK	46.1	32.5	7.6	31.4	-	54.8	110.8	56.0	
Vert	5875.000	PK	43.0	32.5	7.6	31.4	-	51.7	105.2	53.5	
Vert	5925.000	PK	40.8	32.6	7.7	31.4	-	49.7	68.2	18.5	
Vert	11550.000	PK	42.2	40.0	-2.0	33.3	-	46.9	73.9	27.0	Floor noise
Vert	17325.000	PK	44.1	42.7	0.1	32.5	-	54.4	73.9	19.5	Floor noise
Vert	3850.000	AV	39.2	29.7	6.8	31.7	-	44.0	53.9	9.9	
Vert	11550.000	AV	33.3	40.0	-2.0	33.3	-	38.0	53.9	15.9	Floor noise
Vert	17325.000	AV	35.3	42.7	0.1	32.5	-	45.6	53.9	8.3	Floor noise

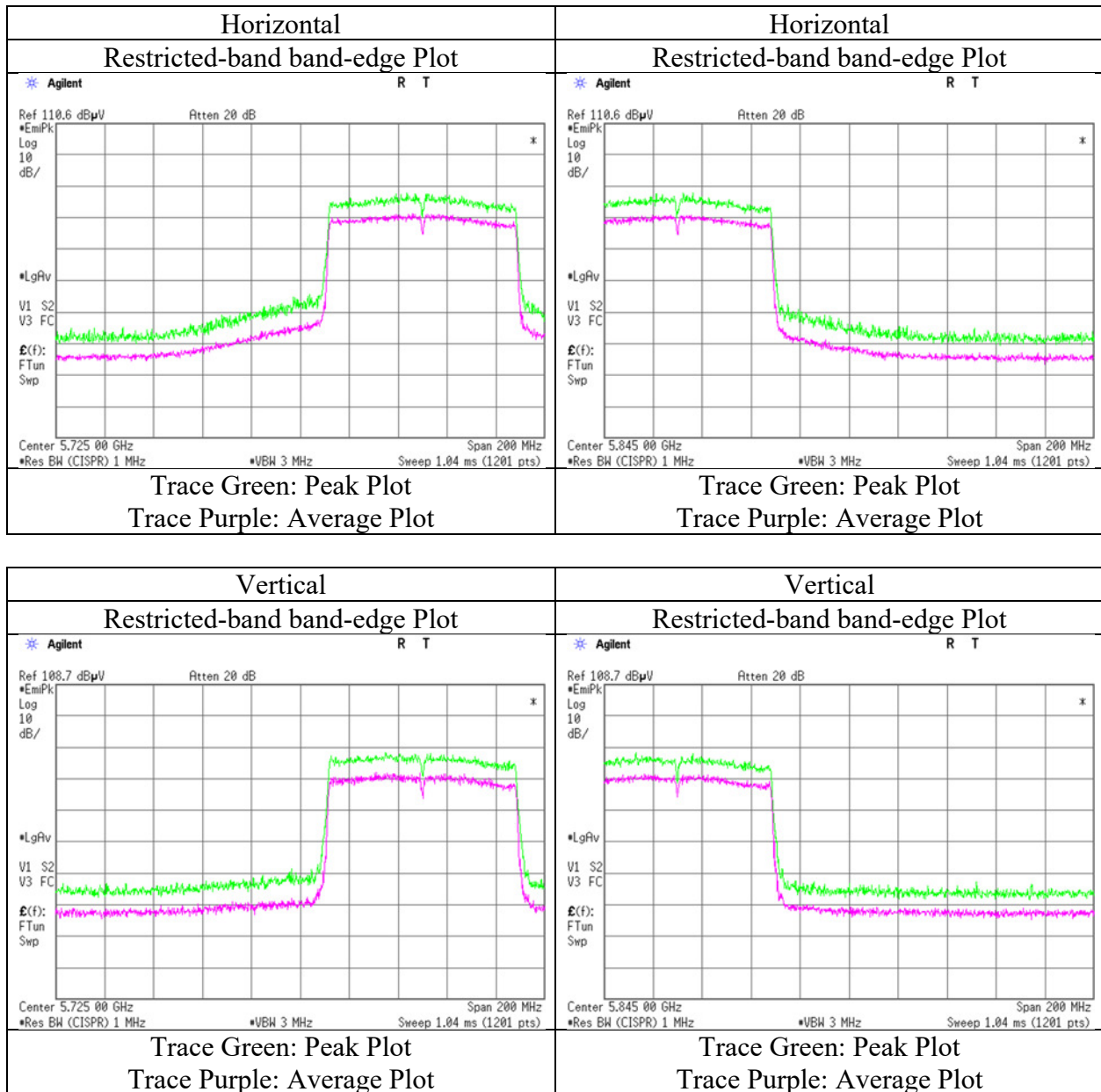
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12079941H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 31, 2018
Temperature / Humidity	22deg. C / 28 % RH
Engineer	Ken Fujita
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5775 MHz



* Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Ise EMC Lab.

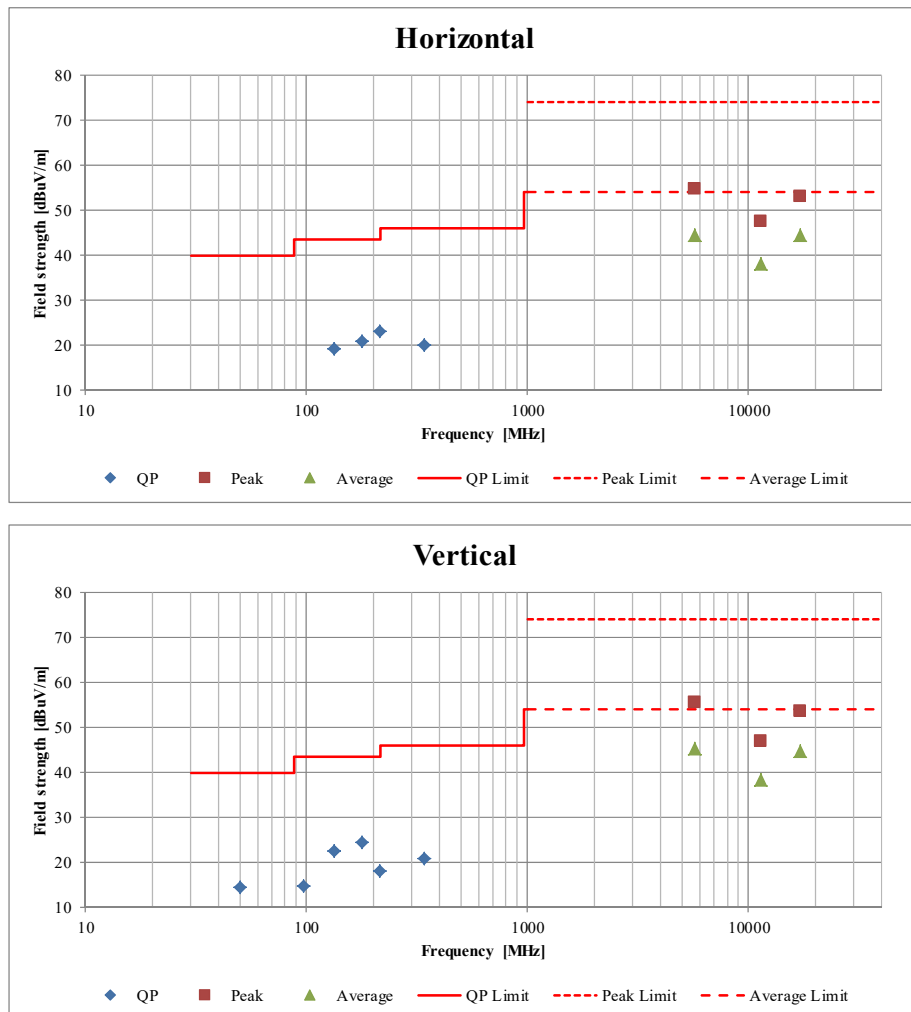
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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Radiated Spurious Emission (Plot data, Worst case)

Report No. 12079941H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.3
Date January 31, 2018
Temperature / Humidity 22deg. C / 28 % RH
Engineer Ken Fujita
(1 GHz - 10 GHz)
Mode Tx 11ac-20 5700 MHz



*These plots data contains sufficient number to show the trend of characteristic features for EUT.

Radiated Spurious Emission

Report No. 12079941H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.3
Date January 31, 2018 No.3 February 1, 2018 No.3 February 3, 2018 No.3 February 6, 2018
Temperature / Humidity 23 deg. C / 31 % RH 23 deg. C / 28 % RH 23 deg. C / 33 % RH 22 deg. C / 29 % RH
Engineer Tomoki Matsui Tomoki Matsui Ken Fujita Takafumi Noguchi
(1 GHz - 10 GHz) (10 GHz - 26.5 GHz) (26.5 GHz - 40 GHz) (Below 1 GHz)
Mode Tx 11ac-80 5530 MHz + Tx 3DH5 Hopping ON

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	50.143	QP	22.3	10.6	7.5	32.2	-	8.2	40.0	31.8	
Hori	96.574	QP	25.5	9.5	8.1	32.2	-	10.9	43.5	32.6	
Hori	150.429	QP	31.7	15.0	8.7	32.1	-	23.3	43.5	20.2	
Hori	180.145	QP	26.1	16.3	9.0	32.1	-	19.3	43.5	24.2	
Hori	215.429	QP	36.2	11.3	9.3	32.1	-	24.7	43.5	18.8	
Hori	341.717	QP	29.0	14.3	10.3	32.0	-	21.6	46.0	24.4	
Hori	5460.000	PK	50.4	32.0	7.5	31.3	-	58.6	73.9	15.3	
Hori	5470.000	PK	52.7	32.0	7.5	31.3	-	60.9	68.2	7.3	
Hori	11060.000	PK	42.5	40.5	-2.4	33.3	-	47.3	73.9	26.6	Floor noise
Hori	16590.000	PK	44.3	39.6	0.0	32.6	-	51.3	73.9	22.6	Floor noise
Hori	5460.000	AV	40.5	32.0	7.5	31.3	-	48.7	53.9	5.2	
Hori	11060.000	AV	32.0	40.5	-2.4	33.3	-	36.8	53.9	17.1	Floor noise
Hori	16590.000	AV	35.3	39.6	0.0	32.6	-	42.3	53.9	11.6	Floor noise
Vert	50.143	QP	30.8	10.6	7.5	32.2	-	16.7	40.0	23.3	
Vert	96.574	QP	30.2	9.5	8.1	32.2	-	15.6	43.5	27.9	
Vert	150.429	QP	34.3	15.0	8.7	32.1	-	25.9	43.5	17.6	
Vert	180.145	QP	28.4	16.3	9.0	32.1	-	21.6	43.5	21.9	
Vert	215.429	QP	30.3	11.3	9.3	32.1	-	18.8	43.5	24.7	
Vert	341.717	QP	27.9	14.3	10.3	32.0	-	20.5	46.0	25.5	
Vert	5460.000	PK	50.9	32.0	7.5	31.3	-	59.1	73.9	14.8	
Vert	5470.000	PK	52.7	32.0	7.5	31.3	-	60.9	68.2	7.3	
Vert	11060.000	PK	42.5	40.5	-2.4	33.3	-	47.3	73.9	26.6	Floor noise
Vert	16590.000	PK	44.3	39.6	0.0	32.6	-	51.3	73.9	22.6	Floor noise
Vert	5460.000	AV	40.8	32.0	7.5	31.3	-	49.0	53.9	4.9	
Vert	11060.000	AV	32.0	40.5	-2.4	33.3	-	36.8	53.9	17.1	Floor noise
Vert	16590.000	AV	35.3	39.6	0.0	32.6	-	42.3	53.9	11.6	Floor noise

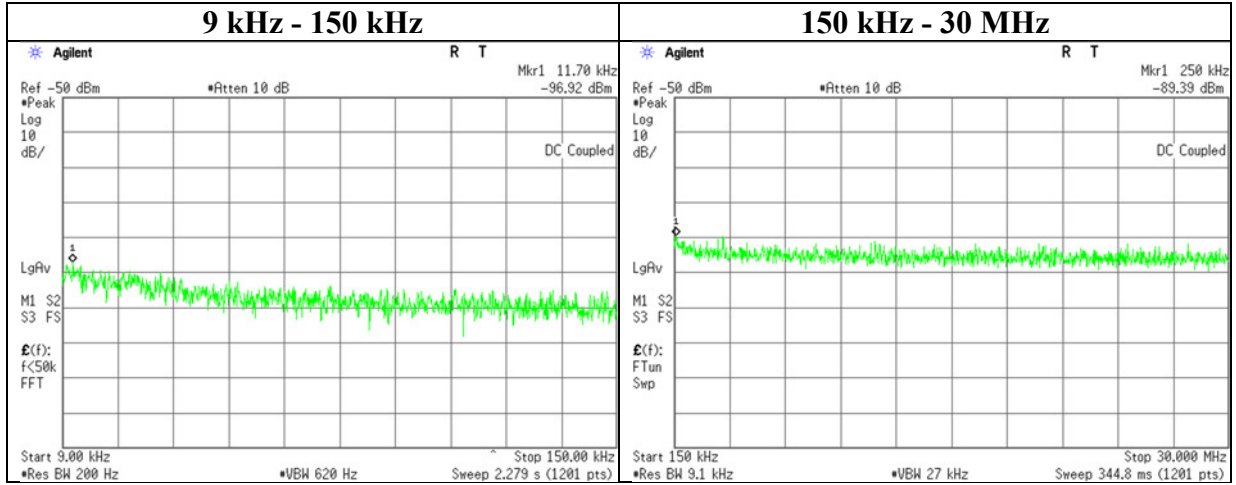
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.45 m / 3.0 m) = 3.43 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Conducted Spurious Emission

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	12079941H
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20 5700 MHz



Frequency [kHz]	Reading [dBm]	Cable Loss [dB]	Attenuator [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
11.70	-96.9	0.80	9.8	7.3	2	-76.0	300	6.0	-14.7	46.2	60.9	
250.00	-89.4	0.80	9.8	7.3	2	-68.5	300	6.0	-7.2	19.6	26.8	

$E \text{ [dBuV/m]} = \text{EIRP [dBm]} - 20 \log (\text{Distance [m]}) + \text{Ground bounce [dB]} + 104.8 \text{ [dBuV/m]}$

$\text{EIRP [dBm]} = \text{Reading [dBm]} + \text{Cable loss [dB]} + \text{Attenuator Loss [dB]} + \text{Antenna gain [dBi]} + 10 * \log (N)$

N: Number of output

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Ise EMC Lab.

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APPENDIX 2: Test instruments

Test Instruments

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE/CE	2017/10/31 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	1301	RE/CE	2018/01/24 * 12
MJM-16	Measure	KOMELON	KMC-36	-	RE/CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	RE/CE	2017/08/22 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2017/05/22 * 12
MCC-167	Microwave Cable	Junkosha	MWX221	1404S374(1m) / 1405S074(5m)	RE	2017/05/29 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2017/03/21 * 12
MMM-08	DIGITAL HiTESTER	Hioki	3805	051201197	RE	2018/01/09 * 12
MSA-15	Spectrum Analyzer	Agilent	E4440A	MY46187105	AT	2017/10/16 * 12
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2017/03/21 * 12
MAT-23	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2017/03/21 * 12
MPM-16	Power Meter	Agilent	8990B	MY51000271	AT	2017/04/28 * 12
MPSE-22	Power sensor	Agilent	N1923A	MY54070003	AT	2017/04/28 * 12
MPSE-23	Power sensor	Agilent	N1923A	MY54070004	AT	2017/04/28 * 12
MAT-10	Attenuator(10dB)	Weinschel Corp	2	BL1173	AT	2017/11/14 * 12
MOS-19	Thermo-Hygrometer	Custom	CTH-201	0001	AT	2017/12/21 * 12
MCC-177	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S304	RE	2017/03/13 * 12
MHF-22	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCB	602	RE	2018/01/18 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2017/05/14 * 12
MCC-54	Microwave Cable	Suhner	SUCOFLEX101	2873(1m) / 2876(5m)	RE	2017/03/02 * 12
MPA-03	Microwave System Power Amplifier	Agilent	83050A	MY39500610	RE	2017/10/12 * 12
MHA-29	Horn Antenna 26.5-40GHz	ETS LINDGREN	3160-10	00152399	RE	2017/09/15 * 12
MPA-22	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 / 1871328	RE	2017/09/07 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE/CE	2017/08/22 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2017/10/02 * 12
MLA-22	Logperiodic Antenna (200-1000MHz)	Schwarzbeck	VUSLP9111B	911B-191	RE	2018/01/30 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2017/07/12 * 12
MAT-98	Attenuator	KEYSIGHT	8491A	MY52462349	RE	2017/12/14 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2017/03/27 * 12
MLS-24	LISN(AMN)	Schwarzbeck	NSLK8127	8127-730	CE	2017/07/20 * 12
MCC-112	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/SFM141(3m)/sucoform141-PE(1m)/421-010(1.5m)/RFM-E321(Switcher)	-/00640	CE	2017/07/12 * 12
MAT-66	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2017/12/19 * 12

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

RE: Radiated Spurious Emission

AT: Antenna Terminal Conducted test

UL Japan, Inc.

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