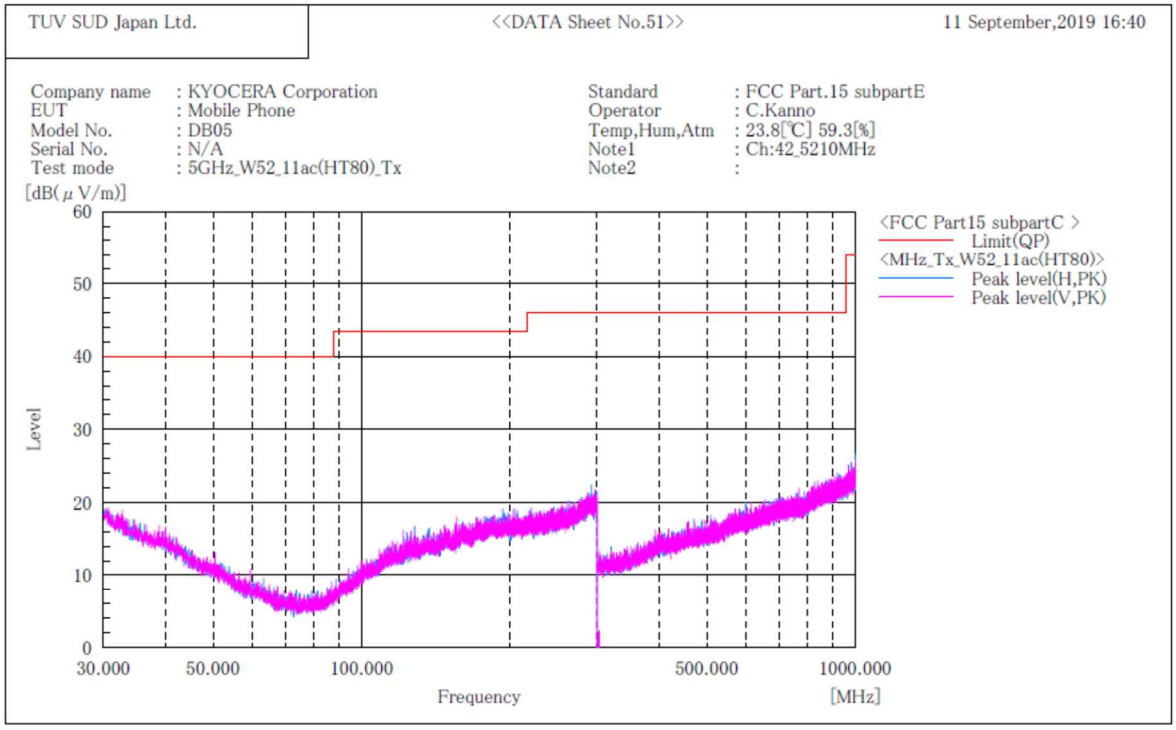
[11n(HT80)]
W52
BELOW 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]



Final Result

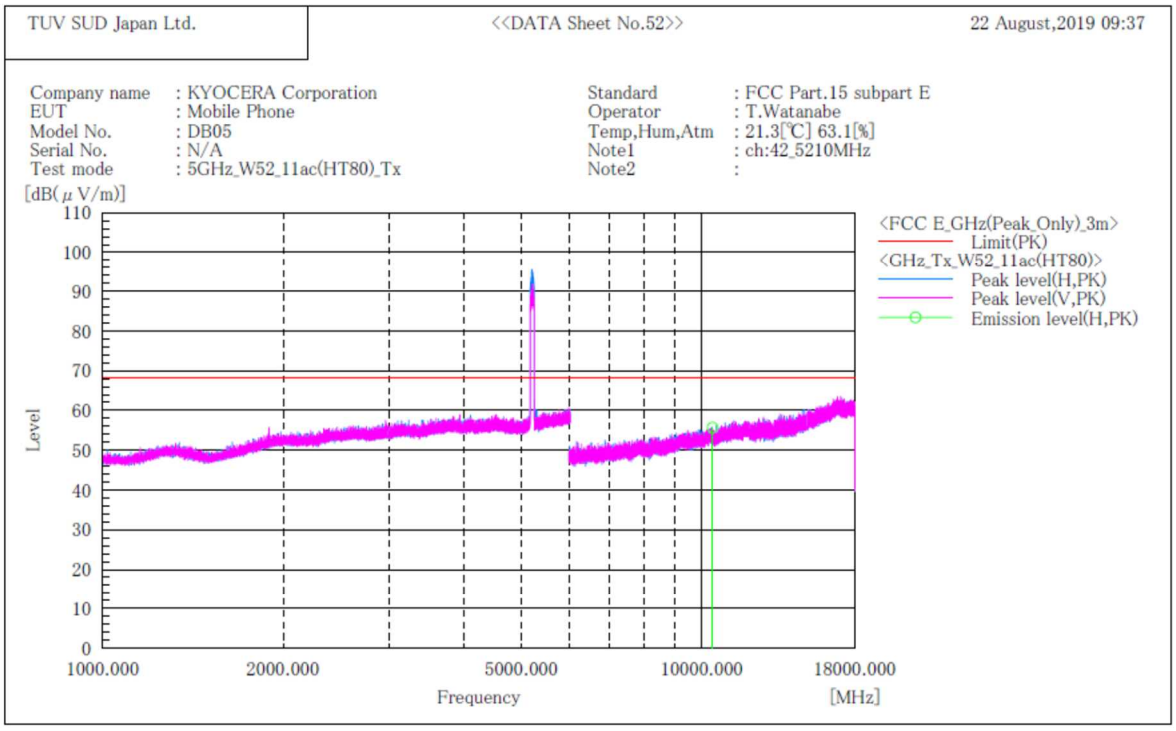
No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

Japan

[11n(HT80)]
W52
ABOVE 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]



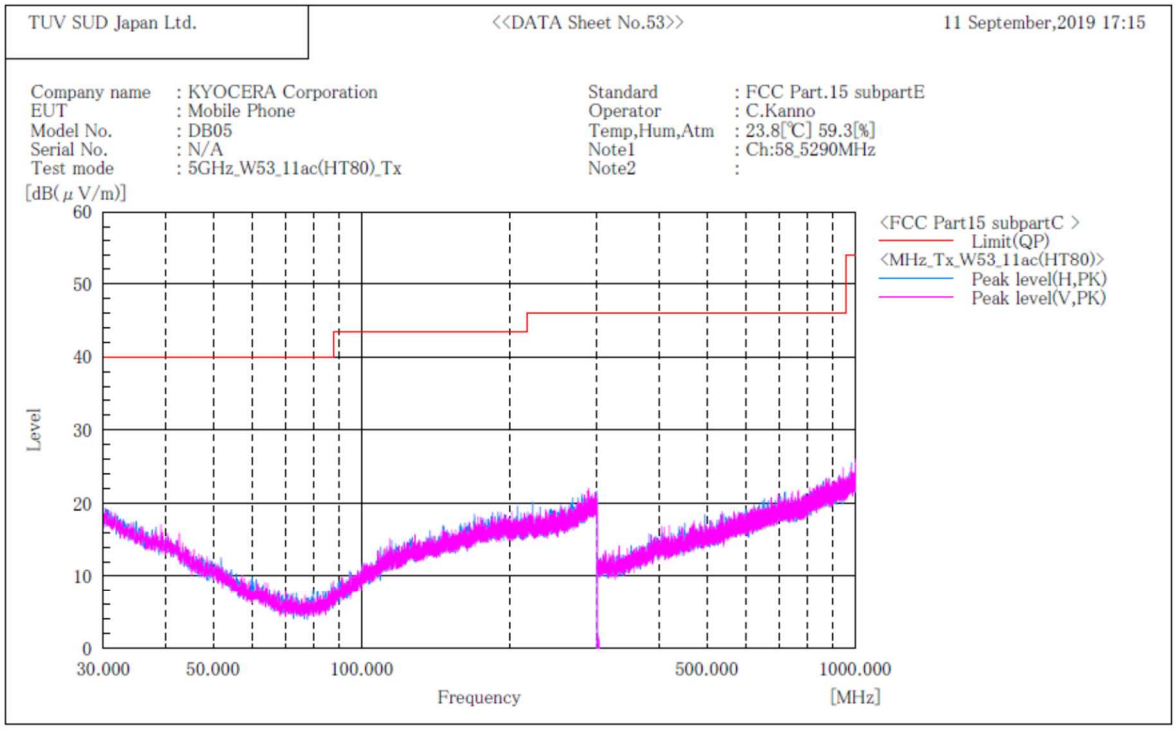
Final Result

No.	Frequency	(P)	Reading PK	c.f	Result PK	Limit PK	Margin PK	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[cm]	[°]	
1	10420.000	H	44.8	10.9	55.7	68.2	12.5	115.0	203.0	

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

[11n(HT80)]
W53
BELOW 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]



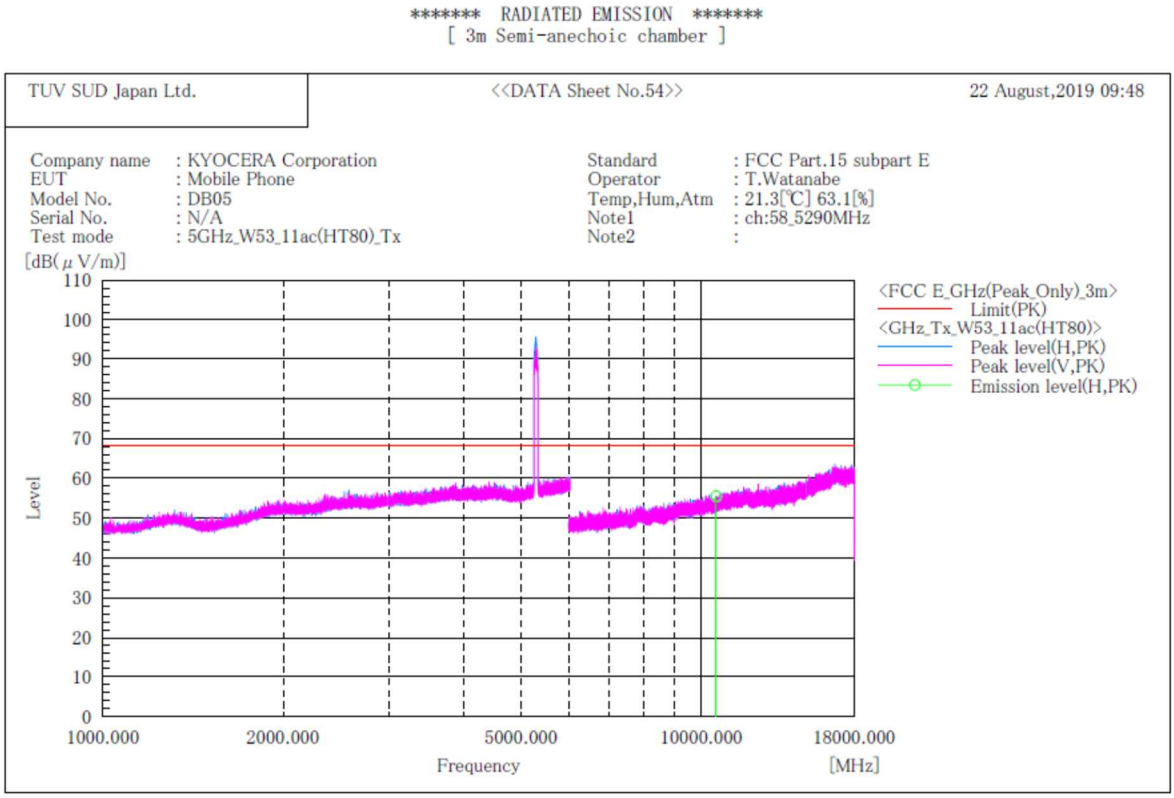
Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

Japan

[11n(HT80)]
W53
ABOVE 1GHz

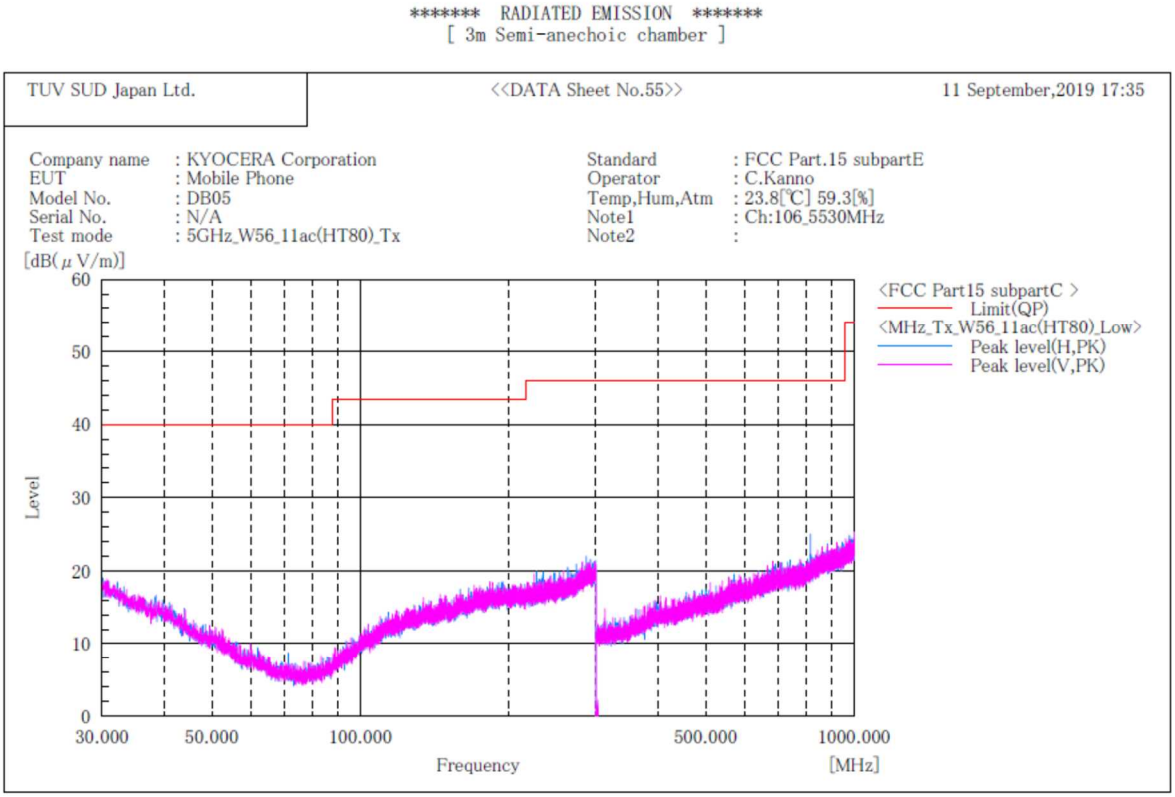


Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin PK [dB]	Height [cm]	Angle [°]	Remark
1	10580.000	H	44.3	11.2	55.5	68.2	12.7	131.0	269.0	

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

[11n(HT80)]
W56 / Channel Low
BELOW 1GHz



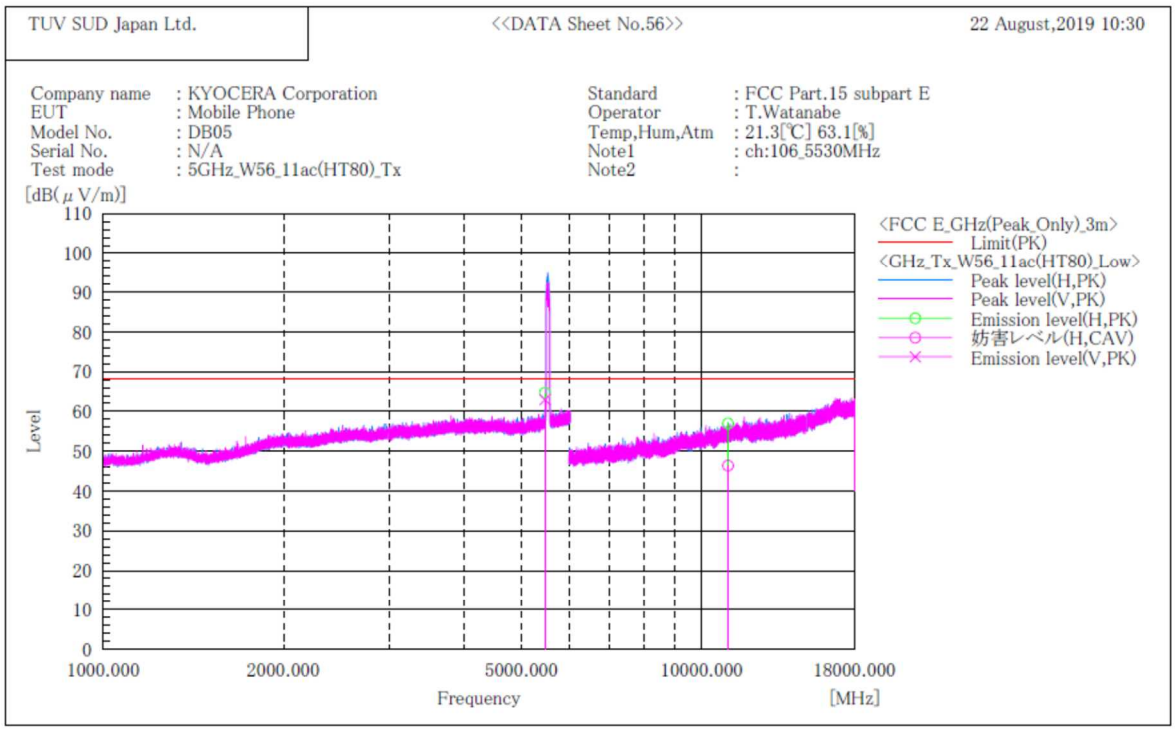
Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

[11n(HT80)]
W56 / Channel Low
ABOVE 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]

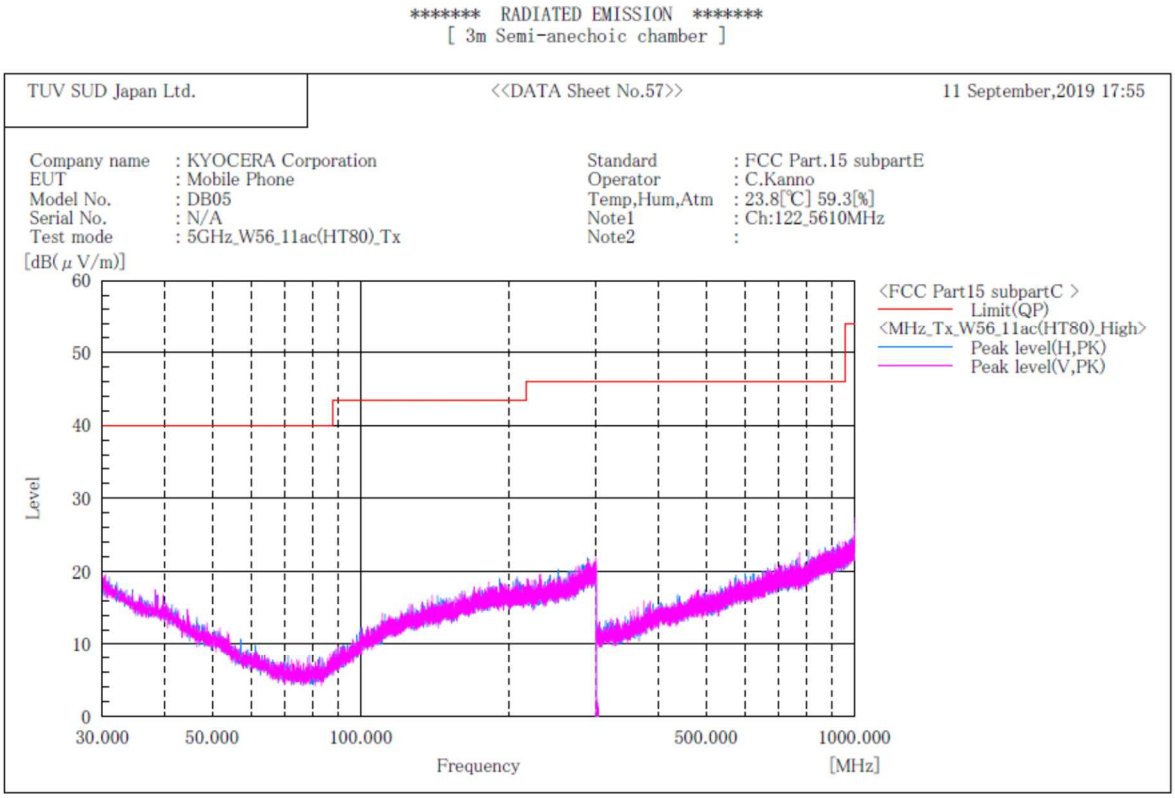


Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]	Remark
1	5466.600	H	53.7	--------	11.0	64.7	--------	68.2	3.5	--------	126.0	117.0	
2	5468.900	V	52.0	--------	11.0	63.0	--------	68.2	5.2	--------	100.0	309.0	
3	11060.000	H	45.1	34.5	11.9	57.0	46.4	74.0	17.0	7.6	140.0	76.0	

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

[11n(HT80)]
W56 / Channel High
BELOW 1GHz



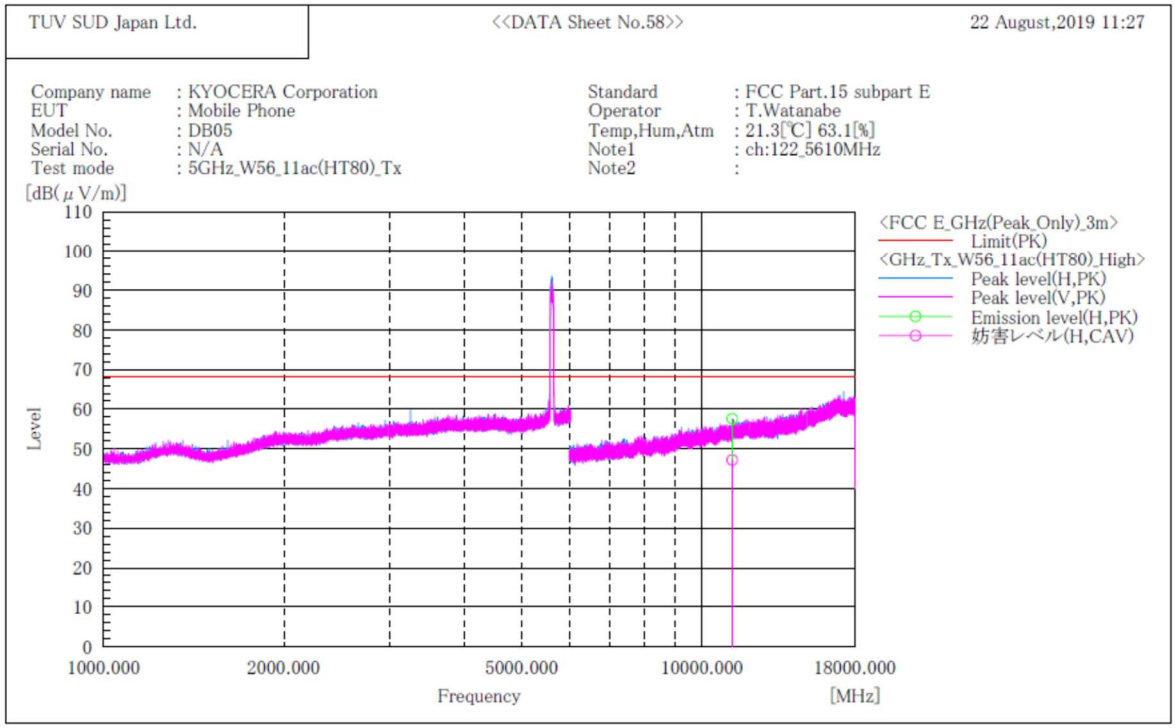
Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

[11n(HT80)]
W56 / Channel High
ABOVE 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]



Final Result

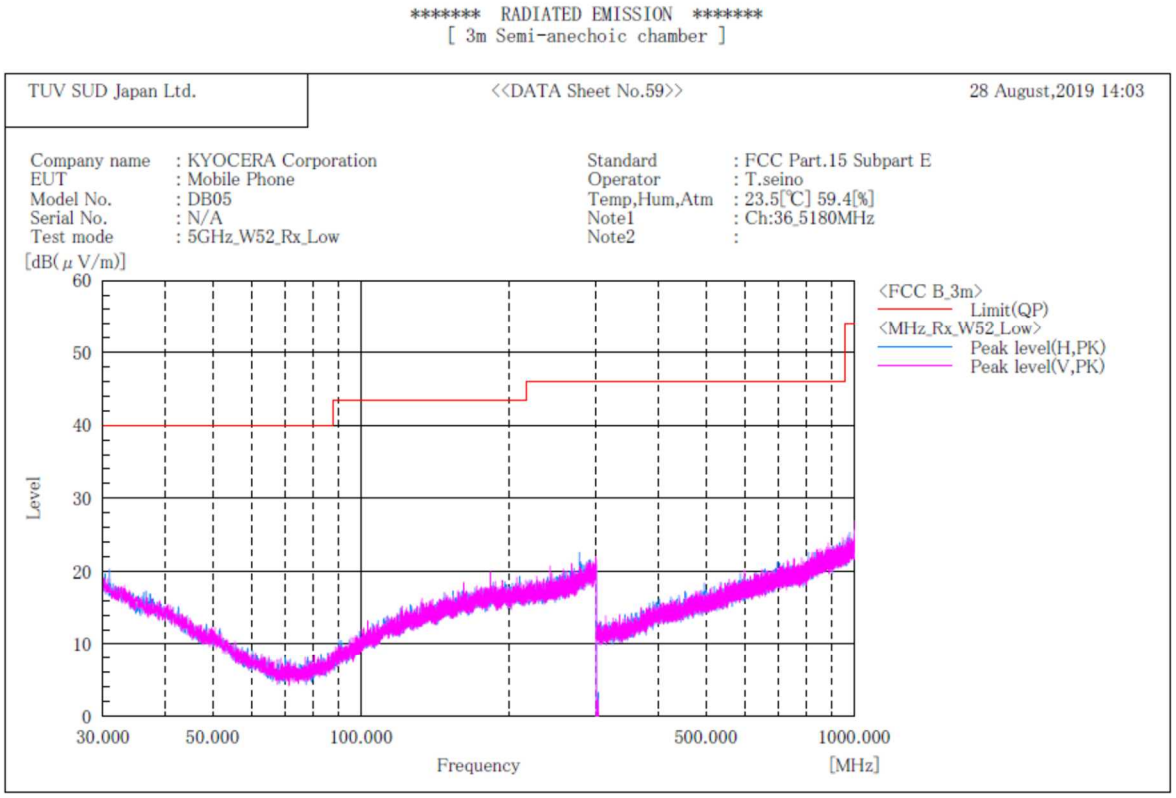
No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]	Remark
1	11220.000	H	45.5	35.1	12.1	57.6	47.2	74.0	16.4	6.8	139.0	126.0	

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

Japan

Receive mode

W52 / Channel Low
BELOW 1GHz



Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

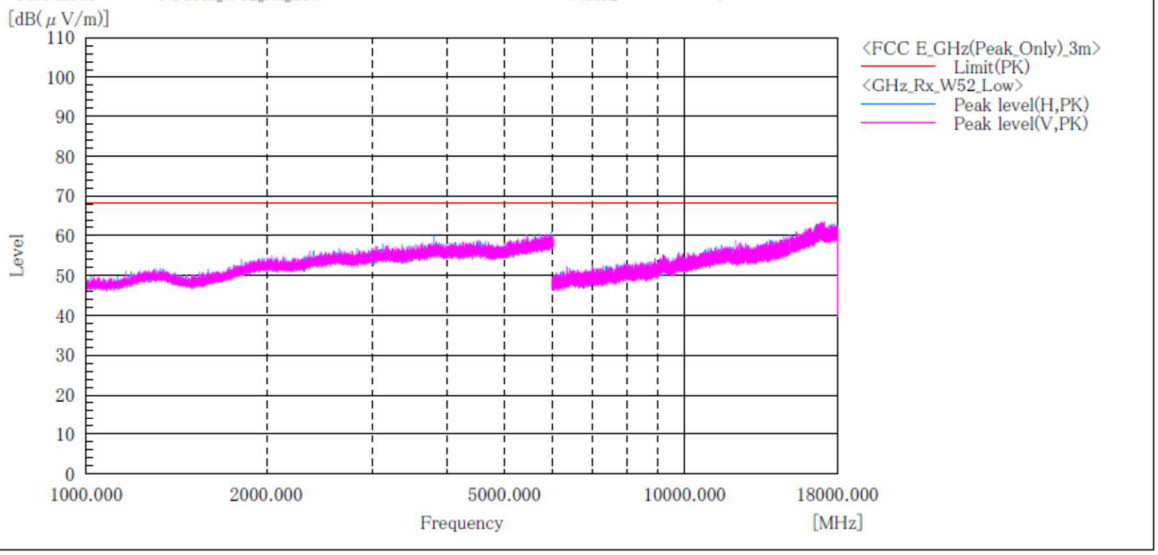
Japan

W52 / Channel Low
ABOVE 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]

TUV SUD Japan Ltd. <<DATA Sheet No.60>> 26 August,2019 08:55

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart E
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: DB05	Temp,Hum,Atm	: 21.9[℃] 63.0[%]
Serial No.	: N/A	Note1	: ch:36_5180MHz
Test mode	: 5GHz_W52_Rx_Low	Note2	:



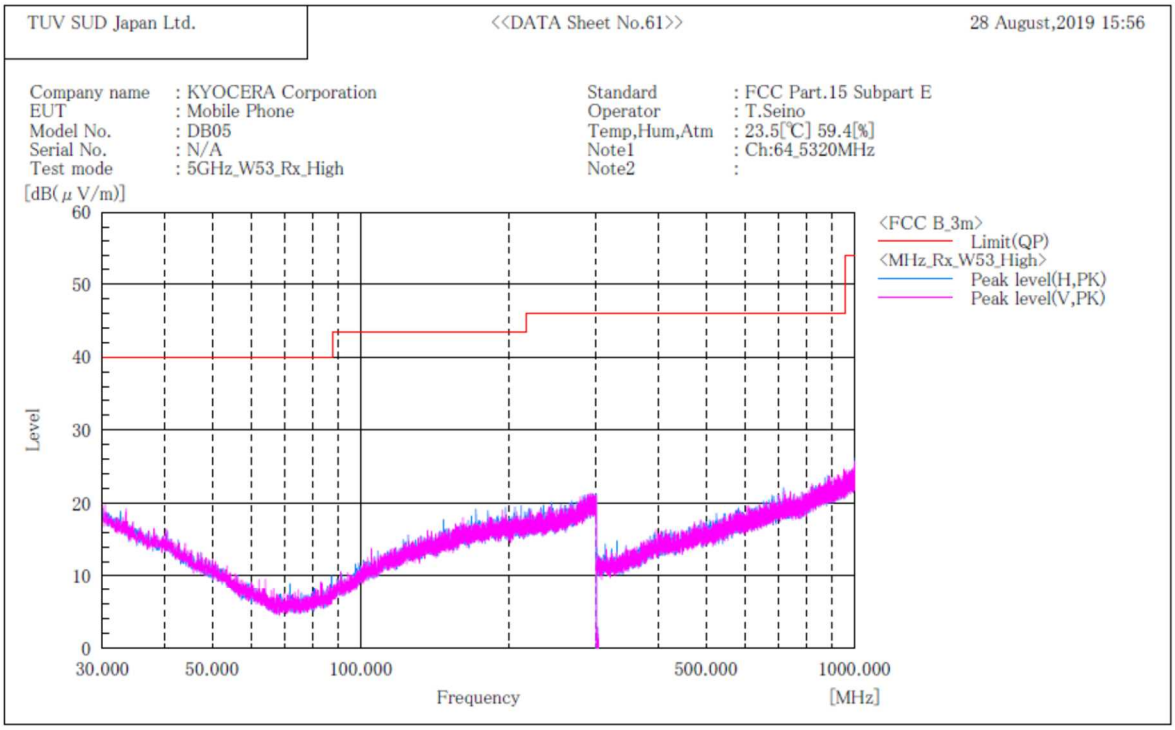
Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]	Remark

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

W53 / Channel High
BELOW 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]



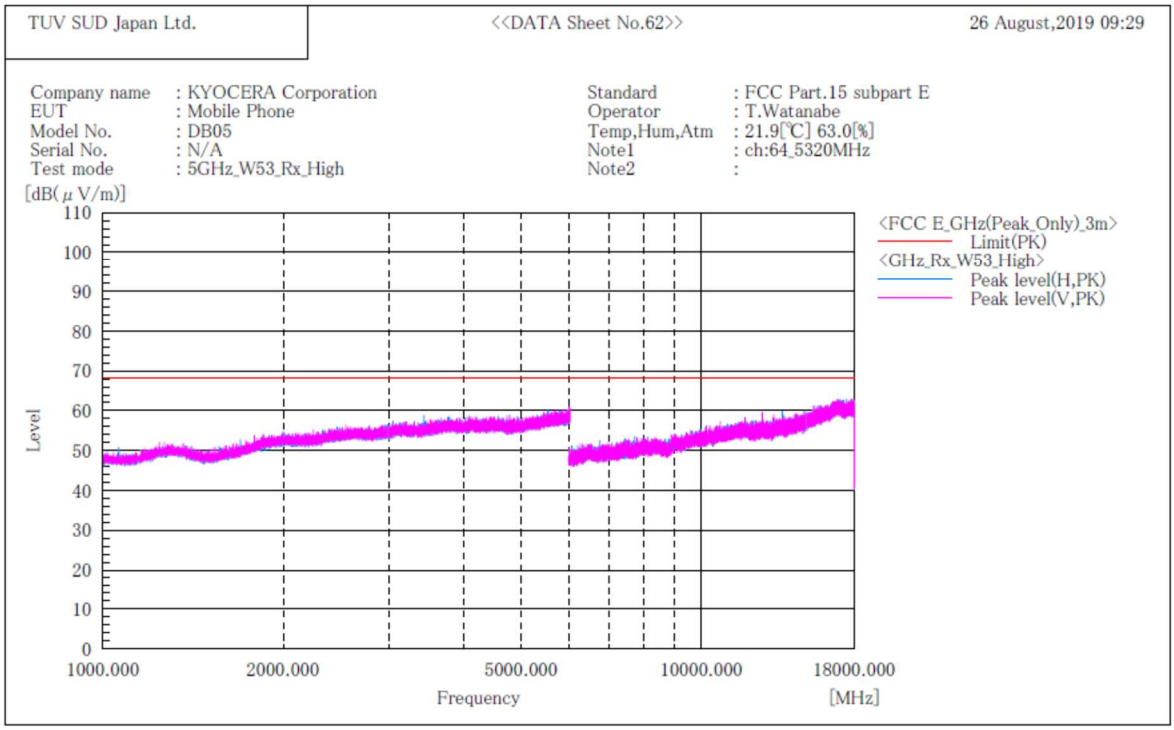
Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

W53 / Channel High
ABOVE 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]



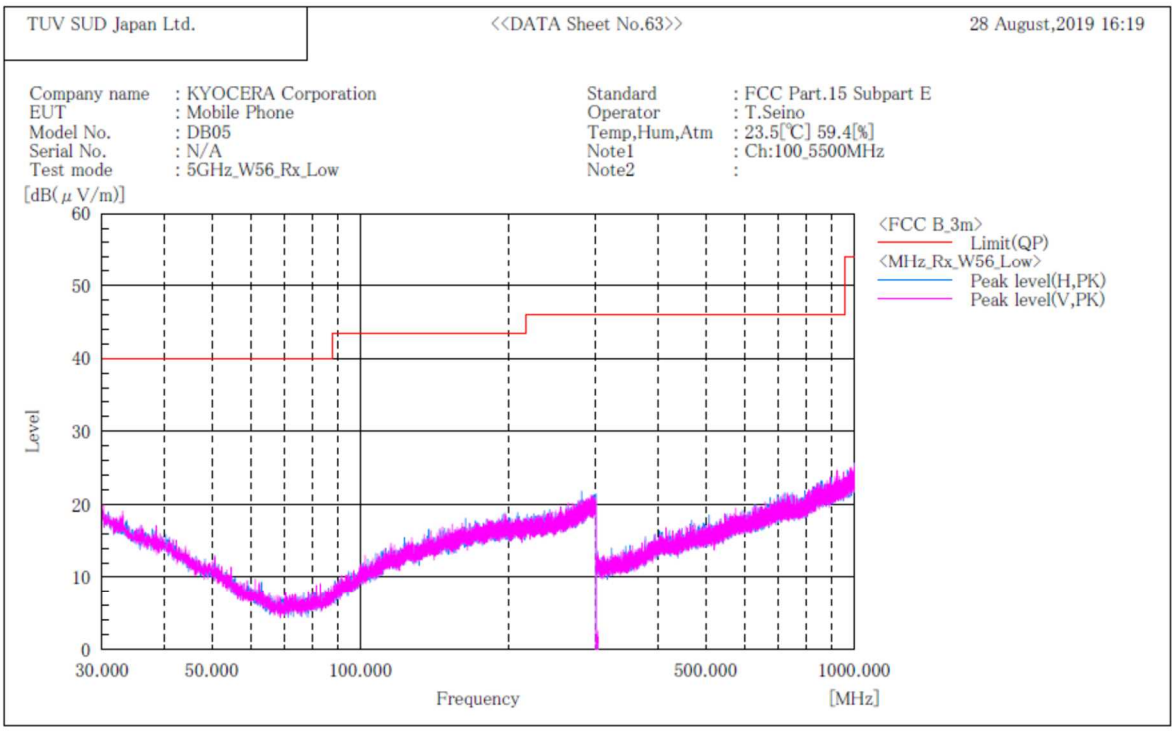
Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]	Remark

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

W56 / Channel Low
BELOW 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]



Final Result

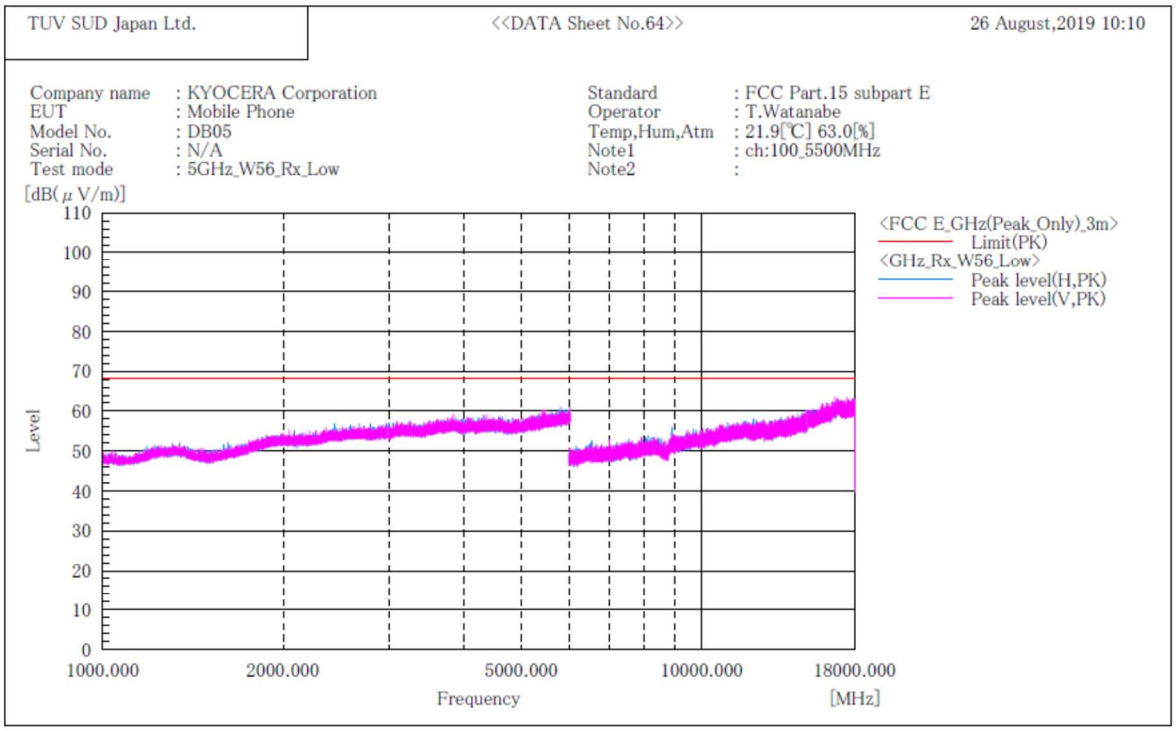
No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

Japan

W56 / Channel Low
ABOVE 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]

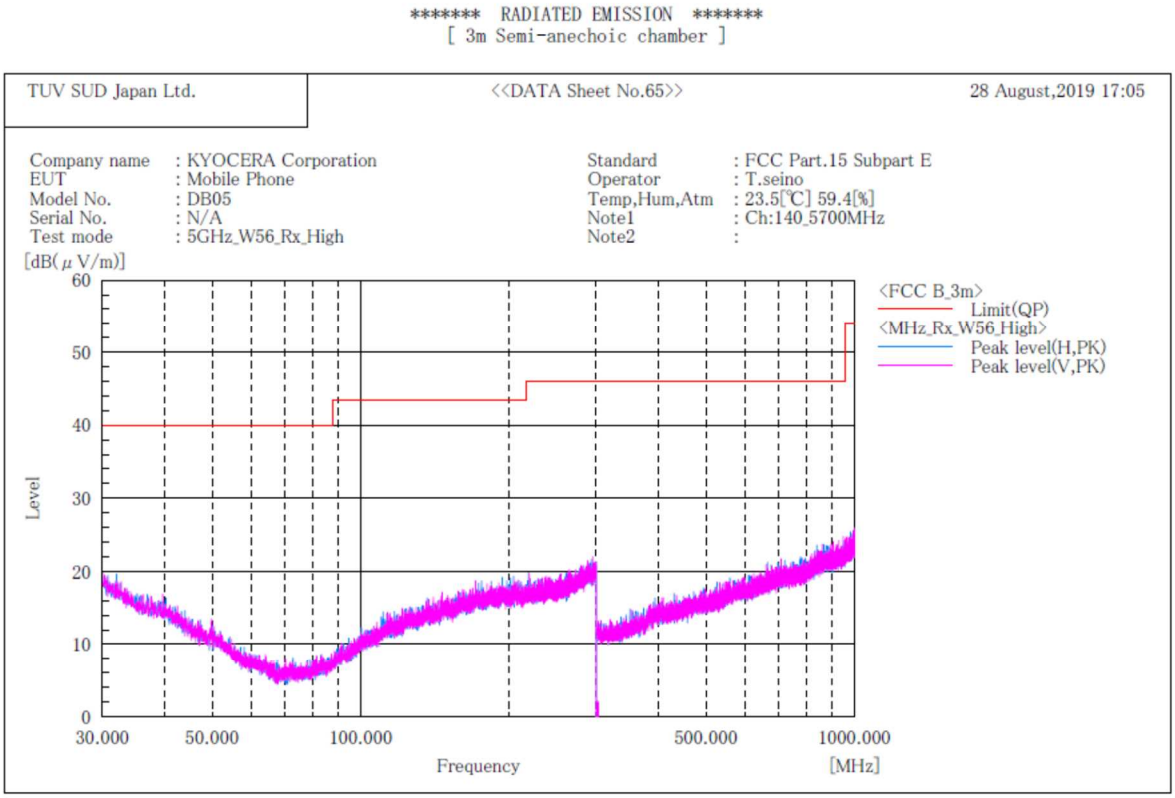


Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]	Remark

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

W56 / Channel High
BELOW 1GHz



Final Result

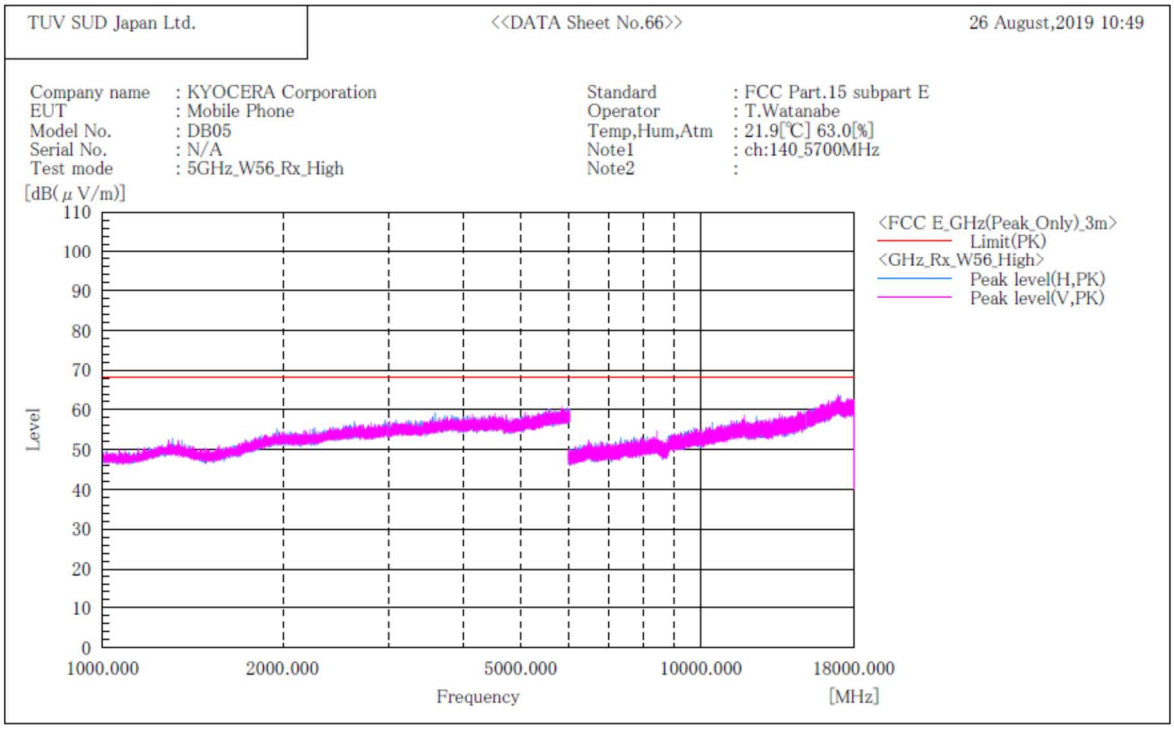
No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

Japan

W56 / Channel High
ABOVE 1GHz

******* RADIATED EMISSION *******
[3m Semi-anechoic chamber]



Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]	Remark

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

Japan

4.5 Frequency Stability

4.5.1 Measurement procedure

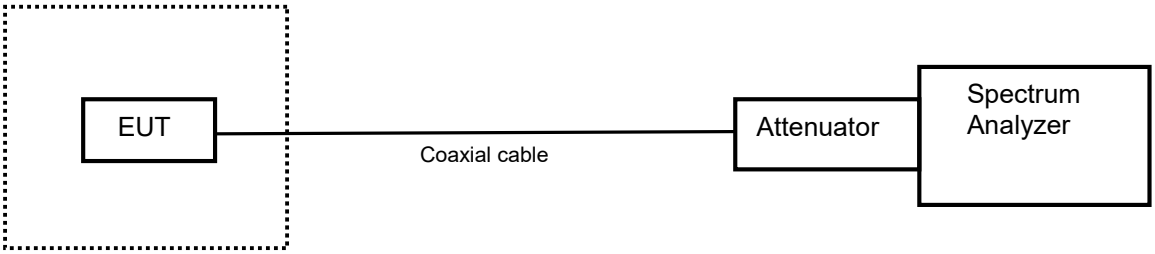
[FCC 15.407(g)]

The EUT was placed of an inside of an constant temperature chamber as the temperature in the chamber was varied between -30˚C and +60˚C. The temperature was incremented by 10˚C intervals and the unit was allowed to stabilize at each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channels center frequency was recorded.

The EUT was set to operate with following conditions.
- 5.2 GHz Band, 5.3 GHz Band, 5.6 GHz Band

The test mode of EUT is as follows.
- Tx mode

- Test configuration



Constant Temperature Chamber

4.5.2 Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified.

Japan

4.5.3 Measurement result

Date : 8-August-2019
Temperature : 23.1 [˚C]
Humidity : 48.6 [%]
Test place : Shielded room No.4

Test engineer : Chiaki Kanno

[Channel: 36 (5180 MHz)]

Power Supply [V]	Temperature [ºC]	Measurements Frequency (startup) [Hz]	Frequency Tolerance (startup) [ppm]	Measurements Frequency (2mins) [Hz]	Frequency Tolerance (2mins) [ppm]	Measurements Frequency (5mins) [Hz]	Frequency Tolerance (5mins) [ppm]	Measurements Frequency (10mins) [Hz]	Frequency Tolerance (10mins) [ppm]
3.85	25(Ref.)	5180006599	0.00000000	5180009898	0.63687178	5180015008	1.62335701	5180010219	0.69884081
	60	5179991503	-2.91428200	5179990818	-3.04652122	5179986878	-3.80713801	5179994843	-2.26949518
	50	5179976317	-5.84593850	5179983548	-4.44999433	5179985904	-3.99516866	5179986596	-3.86157809
	40	5179990031	-3.19845152	5179986514	-3.87740819	5179983393	-4.47991707	5179994960	-2.24690833
	30	5180008839	0.43243188	5180012654	1.16891743	5180002696	-0.75347394	5180001283	-1.02625352
	20	5180001192	-1.04382106	5180012525	1.14401399	5180009413	0.54324255	5180008448	0.35694935
	10	5180024216	3.40096092	5180026367	3.81621135	5180016433	1.89845318	5180021133	2.80578793
	0	5180021939	2.96138619	5180020963	2.77296944	5180023436	3.25038196	5180024657	3.48609595
	-10	5180028251	4.17991745	5180028011	4.13358547	5180042544	6.93918035	5180038520	6.16234736
	-20	5180034394	5.36582328	5180045109	7.43435346	5180045723	7.55288613	5180037715	6.00694215
	-30	5180017769	2.15636791	5180022631	3.09497675	5180010643	0.78069399	5180018624	2.32142561
3.47	25	5180017526	2.10945677	5180011116	0.87200661	5180009934	0.64382157	5180024294	3.41601881
4.24	25	5180009732	0.60482548	5180009974	0.65154357	5180010081	0.67219992	5180020280	2.64111633

Frequency Tolerance (ppm) = Measurements Frequency (Hz) – Reference Frequency (Hz) / Reference Frequency (Hz) x 1000000

Japan

[Channel: 64 (5320 MHz)]

Power Supply [V]	Temperature [ºC]	Measurements Frequency (startup) [Hz]	Frequency Tolerance (startup) [ppm]	Measurements Frequency (2mins) [Hz]	Frequency Tolerance (2mins) [ppm]	Measurements Frequency (5mins) [Hz]	Frequency Tolerance (5mins) [ppm]	Measurements Frequency (10mins) [Hz]	Frequency Tolerance (10mins) [ppm]
3.85	25(Ref.)	5320017567	0.00000000	5320006480	-2.08401567	5320004716	-2.41559353	5320015399	-0.40751745
	60	5319989613	-5.25449393	5319985386	-6.04904018	5319990991	-4.99547223	5319985994	-5.93475484
	50	5319991826	-4.83851786	5319980156	-7.03211964	5319981534	-6.77309794	5319986707	-5.80073273
	40	5319991598	-4.88137486	5319994638	-4.30994817	5320001254	-3.06634326	5319985029	-6.11614522
	30	5320003298	-2.68213400	5319999392	-3.41634210	5320009958	-1.43025844	5319999289	-3.43570294
	20	5320008834	-1.64153593	5320010154	-1.39341645	5320005397	-2.28758643	5320013646	-0.73702764
	10	5320026846	1.74416717	5320022106	0.85319267	5320019408	0.34605149	5320023596	1.13326693
	0	5320027549	1.87630959	5320020553	0.56127634	5320024923	1.38270220	5320029557	2.25375196
	-10	5320034443	3.17216998	5320038185	3.87555111	5320032920	2.88589273	5320042176	4.62573661
	-20	5320038319	3.90073900	5320041916	4.57686459	5320032274	2.76446456	5320031920	2.69792342
	-30	5320014693	-0.54022378	5320030229	2.38006733	5320028908	2.13175988	5320033158	2.93062942
3.47	25	5320003858	-2.57687119	5320007544	-1.88401634	5320012818	-0.89266623	5320017907	0.06390956
4.24	25	5320007060	-1.97499348	5320010692	-1.29228897	5320019323	0.33007410	5320003618	-2.62198382

Frequency Tolerance (ppm) = Measurements Frequency (Hz) – Reference Frequency (Hz) / Reference Frequency (Hz) x 1000000

[Channel: 140 (5700 MHz)]

Power Supply [V]	Temperature [ºC]	Measurements Frequency (startup) [Hz]	Frequency Tolerance (startup) [ppm]	Measurements Frequency (2mins) [Hz]	Frequency Tolerance (2mins) [ppm]	Measurements Frequency (5mins) [Hz]	Frequency Tolerance (5mins) [ppm]	Measurements Frequency (10mins) [Hz]	Frequency Tolerance (10mins) [ppm]
3.85	25(Ref.)	5700018031	0.00000000	5700018286	0.04473670	5700008376	-1.69385429	5700015916	-0.37105146
	60	5699977934	-7.03453915	5699985629	-5.68454342	5699986201	-5.58419286	5699986788	-5.48121073
	50	5699989523	-5.00138769	5700003075	-2.62385135	5699993550	-4.29489869	5699986409	-5.54770175
	40	5699997887	-3.53402391	5699991974	-4.57138905	5700007420	-1.86157306	5700004279	-2.41262395
	30	5700011827	-1.08841761	5700004804	-2.32051898	5700015106	-0.51315627	5700009156	-1.55701262
	20	5700029381	1.99122177	5700034900	2.95946432	5700028724	1.87595898	5700021937	0.68526099
	10	5700033362	2.68964061	5700031585	2.37788721	5700036750	3.28402470	5700031997	2.45016769
	0	5700037304	3.38121737	5700032078	2.46437817	5700034801	2.94209596	5700034378	2.86788566
	-10	5700039526	3.77104070	5700043449	4.45928414	5700042074	4.21805683	5700043339	4.43998595
	-20	5700014925	-0.54491056	5700026576	1.49911806	5700030595	2.20420355	5700025389	1.29087311
	-30	5700020489	0.43122671	5700035745	3.10770947	5700030608	2.20648425	5700027971	1.74385413
3.47	25	5700018951	0.16140300	5700015943	-0.36631463	5700021805	0.66210317	5700011972	-1.06297909
4.24	25	5700022597	0.80105010	5700022036	0.70262936	5700006167	-2.08139692	5700017656	-0.06578927

Frequency Tolerance (ppm) = Measurements Frequency (Hz) – Reference Frequency (Hz) / Reference Frequency (Hz) x 1000000

Japan

4.6 AC Power Line Conducted Emissions

4.6.1 Measurement procedure

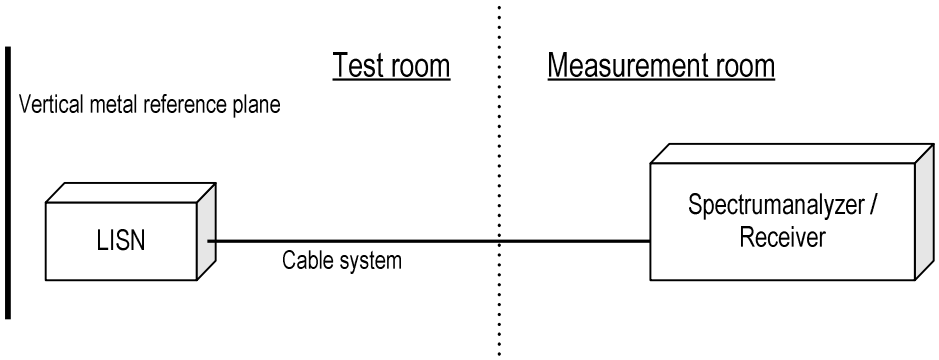
[FCC 15.207]

Test was applied by following conditions.

Test method	:	ANSI C63.10
Frequency range	:	0.15 MHz to 30 MHz
Test place	:	3m Semi-anechoic chamber
EUT was placed on	:	FRP table / (W) 2.0 × (D) 1.0 × (H) 0.8 m
Vertical Metal Reference Plane	:	(W) 2.0 × (H) 2.0 m, 0.4 m away from EUT
Test receiver setting		
- Detector	:	Quasi-peak, Average
- Bandwidth	:	9 kHz

EUT and peripherals are connected to 50Ω/50μH Line Impedance Stabilization Network (LISN) which are connected to reference ground plane, and are placed 80cm away from EUT. Excess of AC power cable is bundled in center.
LISN for peripheral is terminated in 50Ω.
EUT operating mode is selected to emit the maximum noise. Overall frequency range is investigated with spectrum analyzer using peak detector. Maximum emission configuration is determined by manipulating the EUT, peripherals, interconnecting cables. Then, emission measurements are performed with test receiver in above setting to each current-carrying conductor of the mains port. Sufficient time for EUT, peripherals and test equipment is provided in order for them to warm up to their normal operating condition. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits.

- Test configuration



4.6.2 Calculation method

Emission level = Reading + (LISN. factor + Cable system loss)
Margin = Limit – Emission level

Japan

4.6.3 Limit

Frequency [MHz]	Limit	
	QP [dBuV]	AV [dBuV]
0.15-0.5	66-56*	56-46*
0.5-5	56	46
5-30	60	50

*: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

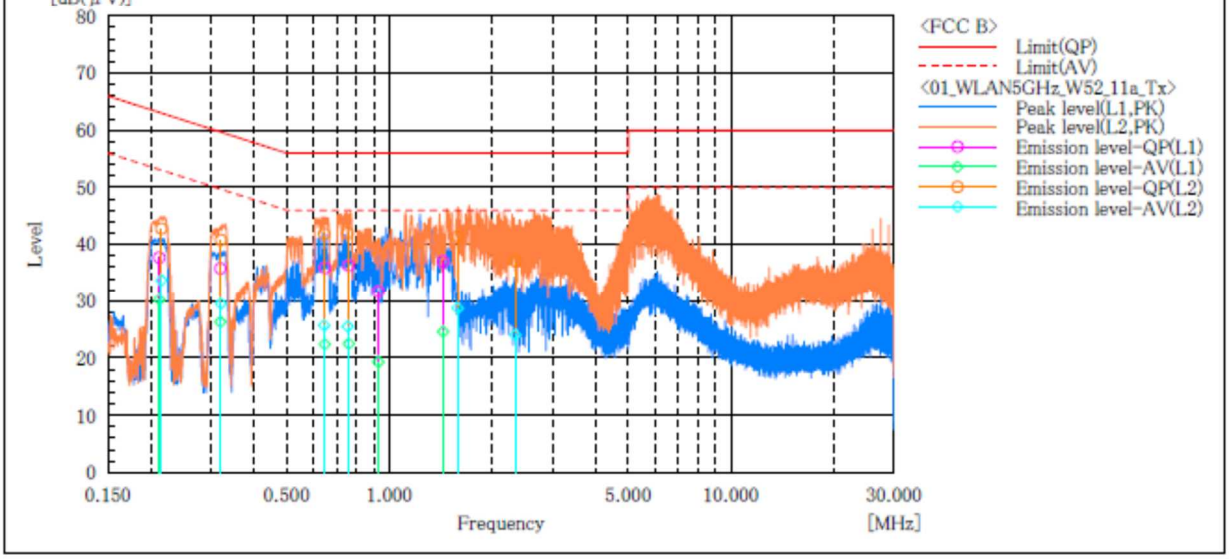
4.6.4 Test data

***** CONDUCTED EMISSION at MAINS PORT *****
[3m Semi-anechoic chamber]

TUV SUD Japan Ltd. <<Data Sheet No.1>> 29 August,2019 13:16

Company Name : KYOCERA Corporation
EUT : Mobile Phone
Model No. : DB05
Serial No. : N/A
Test mode : 5GHz_W52_11a_Tx

Standard : FCC Part.15 Subpart E
Operator : T.Seino
Temp,Hum,Atm : 21.3[℃] 60.5[%]
Note1 :
Note2 :



Final Result

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.212	27.3	19.8	10.4	37.7	30.2	63.1	53.1	25.4	22.9
2	0.320	25.4	15.9	10.4	35.8	26.3	59.7	49.7	23.9	23.4
3	0.647	25.5	12.0	10.4	35.9	22.4	56.0	46.0	20.1	23.6
4	0.760	25.9	12.1	10.4	36.3	22.5	56.0	46.0	19.7	23.5
5	0.928	21.3	8.9	10.4	31.7	19.3	56.0	46.0	24.3	26.7
6	1.436	26.6	14.2	10.4	37.0	24.6	56.0	46.0	19.0	21.4

--- L2 Phase ---

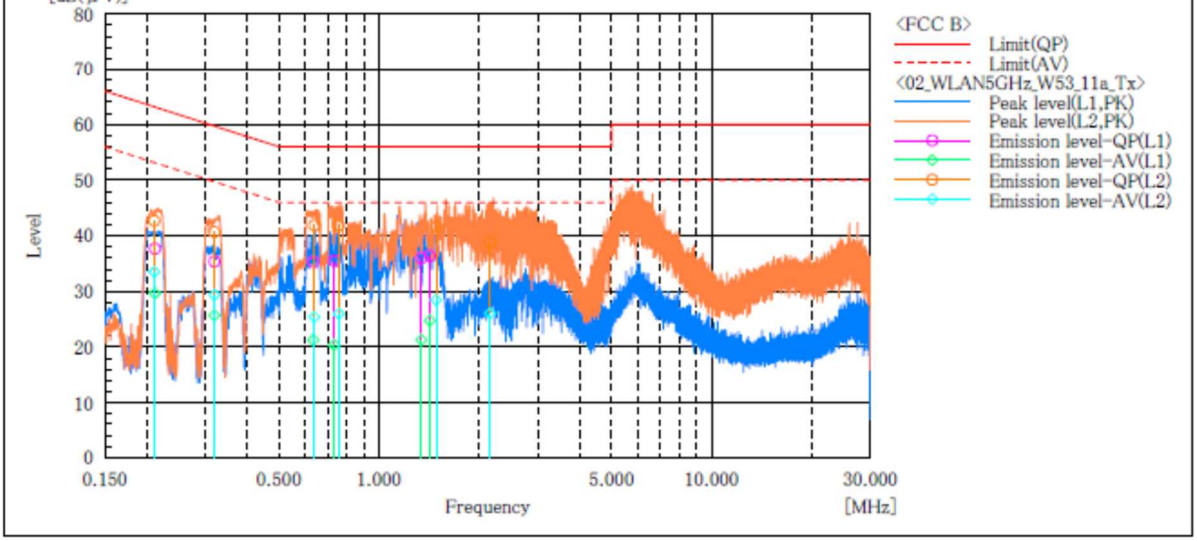
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.215	32.4	23.3	10.4	42.8	33.7	63.0	53.0	20.2	19.3
2	0.321	30.4	19.1	10.4	40.8	29.5	59.7	49.7	18.9	20.2
3	0.644	31.5	15.3	10.4	41.9	25.7	56.0	46.0	14.1	20.3
4	0.755	31.6	15.1	10.4	42.0	25.5	56.0	46.0	14.0	20.5
5	1.582	31.0	18.3	10.4	41.4	28.7	56.0	46.0	14.6	17.3
6	2.334	26.6	13.5	10.5	37.1	24.0	56.0	46.0	18.9	22.0

***** CONDUCTED EMISSION at MAINS PORT *****
[3m Semi-anechoic chamber]

TUV SUD Japan Ltd. <<Data Sheet No.2>> 29 August,2019 14:04

Company Name : KYOCERA Corporation
EUT : Mobile Phone
Model No. : DB05
Serial No. : N/A
Test mode : 5GHz_W53_11a_Tx

Standard : FCC Part.15 Subpart E
Operator : T.Seino
Temp,Hum,Atm : 21.3[℃] 60.5[%]
Note1 :
Note2 :



Final Result

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.212	27.3	19.3	10.4	37.7	29.7	63.1	53.1	25.4	23.4
2	0.320	25.0	15.3	10.4	35.4	25.7	59.7	49.7	24.3	24.0
3	0.635	24.9	10.9	10.4	35.3	21.3	56.0	46.0	20.7	24.7
4	0.733	25.1	10.0	10.4	35.5	20.4	56.0	46.0	20.5	25.6
5	1.339	25.6	10.9	10.4	36.0	21.3	56.0	46.0	20.0	24.7
6	1.421	26.0	14.4	10.4	36.4	24.8	56.0	46.0	19.6	21.2

--- L2 Phase ---

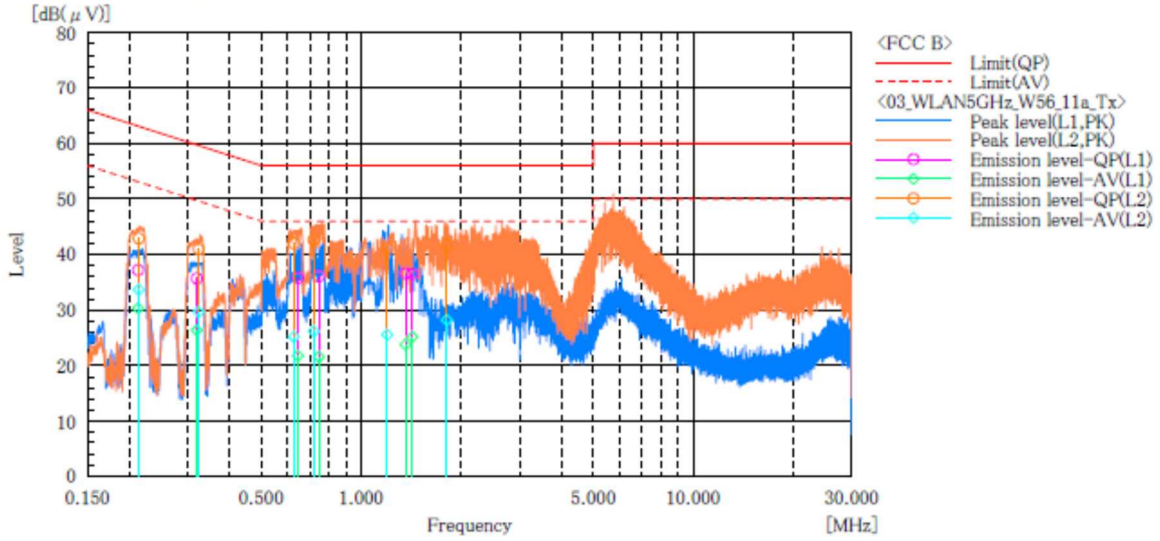
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.211	32.3	23.1	10.4	42.7	33.5	63.2	53.2	20.5	19.7
2	0.320	30.3	19.0	10.4	40.7	29.4	59.7	49.7	19.0	20.3
3	0.639	31.5	15.0	10.4	41.9	25.4	56.0	46.0	14.1	20.6
4	0.757	31.5	15.6	10.4	41.9	26.0	56.0	46.0	14.1	20.0
5	1.483	31.2	18.1	10.4	41.6	28.5	56.0	46.0	14.4	17.5
6	2.154	28.3	15.6	10.5	38.8	26.1	56.0	46.0	17.2	19.9

***** CONDUCTED EMISSION at MAINS PORT *****
[3m Semi-anechoic chamber]

TUV SUD Japan Ltd. <<Data Sheet No.3>> 29 August,2019 14:36

Company Name : KYOCERA Corporation
EUT : Mobile Phone
Model No. : DB05
Serial No. : N/A
Test mode : 5GHz_W56_11a_Tx

Standard : FCC Part.15 Subpart E
Operator : T.Seino
Temp,Hum,Atm : 21.3[℃] 60.5[%]
Note1 :
Note2 :



Final Result

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.213	26.8	19.9	10.4	37.2	30.3	63.1	53.1	25.9	22.8
2	0.320	25.3	16.0	10.4	35.7	26.4	59.7	49.7	24.0	23.3
3	0.645	25.4	11.4	10.4	35.8	21.8	56.0	46.0	20.2	24.2
4	0.746	25.7	11.2	10.4	36.1	21.6	56.0	46.0	19.9	24.4
5	1.360	26.2	13.4	10.4	36.6	23.8	56.0	46.0	19.4	22.2
6	1.425	26.1	14.8	10.4	36.5	25.2	56.0	46.0	19.5	20.8

--- L2 Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.214	32.5	23.3	10.4	42.9	33.7	63.0	53.0	20.1	19.3
2	0.324	30.6	19.3	10.4	41.0	29.7	59.6	49.6	18.6	19.9
3	0.627	31.6	14.8	10.4	42.0	25.2	56.0	46.0	14.0	20.8
4	0.719	32.2	15.8	10.4	42.6	26.2	56.0	46.0	13.4	19.8
5	1.198	30.8	15.2	10.4	41.2	25.6	56.0	46.0	14.8	20.4
6	1.811	31.3	17.8	10.4	41.7	28.2	56.0	46.0	14.3	17.8

Japan

4.7 Duty Cycle

4.7.1 Measurement procedure

[KDB 789033 D02, Section B, Zero-Span Spectrum Analyzer Method]

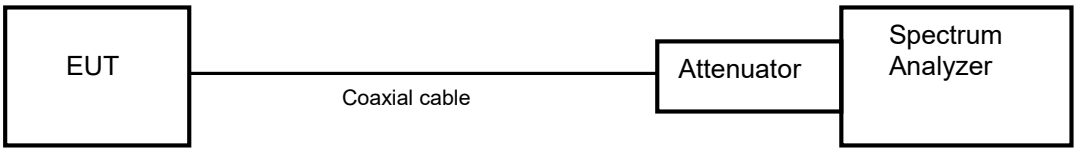
The duty cycle is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

The spectrum analyzer is set to;
- RBW=8 MHz, VBW=8 MHz, Span=0 Hz, Sweep=Auto, Detector=Peak, Trace mode=Single

The EUT was set to operate with following conditions.
- 5.2 GHz Band, 5.3 GHz Band, 5.6 GHz Band

The test mode of EUT is as follows.
- Tx mode

- Test configuration



4.7.2 Limit

None

4.7.3 Measurement result

Date	:	3-August-2019		
Temperature	:	24.5 [˚C]		
Humidity	:	43.1 [%]	Test engineer	:
Test place	:	Shielded room No.4		Chiaki Kanno

Mode	Channel	Frequency (MHz)	Duty Cycle				DCF (dB) 10log(1/x)	DCF (dB) 20log(1/x)
			On Time(ms)	On+Off Time(ms)	X	1/T		
802.11a	36	5180	1.392	1.436	0.969	718.4	0.135	0.270
	40	5200						
	48	5240						
	52	5260	1.392	1.438	0.968	718.4	0.141	0.282
	56	5280						
	64	5320						
	100	5500	1.392	1.438	0.968	718.4	0.141	0.282
	116	5580						
	140	5700						

Note: X = On time / (On + Off time)

Mode	Channel	Frequency (MHz)	Duty Cycle				DCF (dB) 10log(1/x)	DCF (dB) 20log(1/x)
			On Time(ms)	On+Off Time(ms)	X	1/T		
802.11n (20MHz)	36	5180	1.288	1.334	0.966	776.4	0.152	0.305
	40	5200						
	48	5240						
	52	5260	1.288	1.334	0.966	776.4	0.152	0.305
	56	5280						
	64	5320						
	100	5500	1.288	1.334	0.966	776.4	0.152	0.305
	116	5580						
	140	5700						

Note: X = On time / (On + Off time)

Mode	Channel	Frequency (MHz)	Duty Cycle				DCF (dB) 10log(1/x)	DCF (dB) 20log(1/x)
			On Time(ms)	On+Off Time(ms)	X	1/T		
802.11n (40MHz)	38	5190	0.635	0.680	0.934	1574.8	0.297	0.595
	46	5230						
	54	5270	0.636	0.680	0.935	1572.3	0.291	0.581
	62	5310						
	102	5510	0.635	0.680	0.934	1574.8	0.297	0.595
	110	5550						
	134	5670						

Note: X = On time / (On + Off time)

Mode	Channel	Frequency (MHz)	Duty Cycle				DCF (dB) 10log(1/x)	DCF (dB) 20log(1/x)
			On Time(ms)	On+Off Time(ms)	X	1/T		
802.11ac (80MHz)	42	5210	0.323	0.368	0.877	3096.9	0.570	1.140
	58	5290	0.323	0.368	0.878	3092.1	0.563	1.127
	106	5530	0.324	0.369	0.879	3086.4	0.561	1.123
	122	5610	0.323	0.368	0.877	3096.9	0.570	1.140

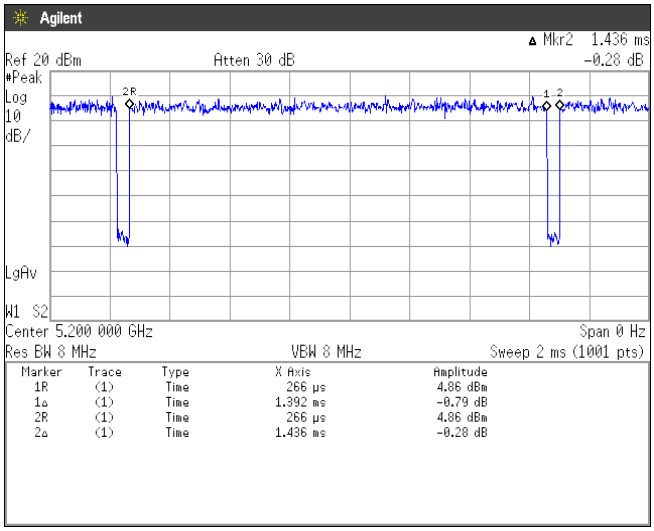
Note: X = On time / (On + Off time)

Japan

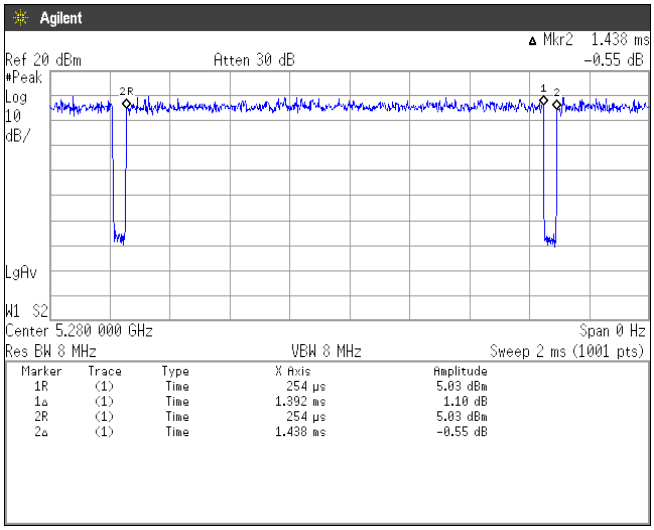
4.7.4 Trace data

[IEEE802.11a]

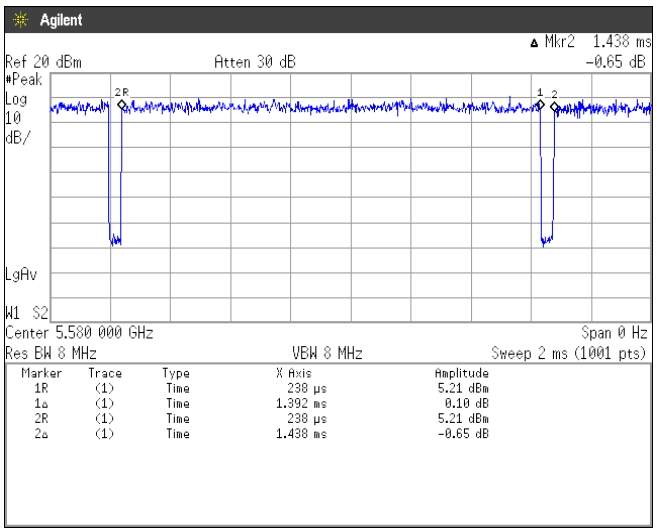
Channel: 40



Channel: 56



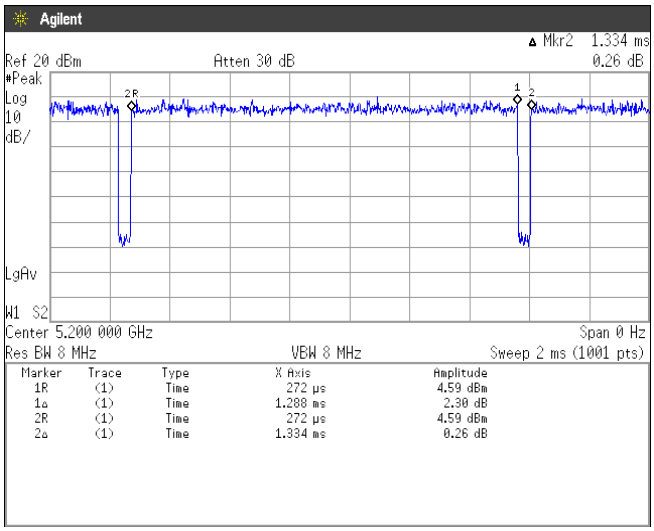
Channel: 116



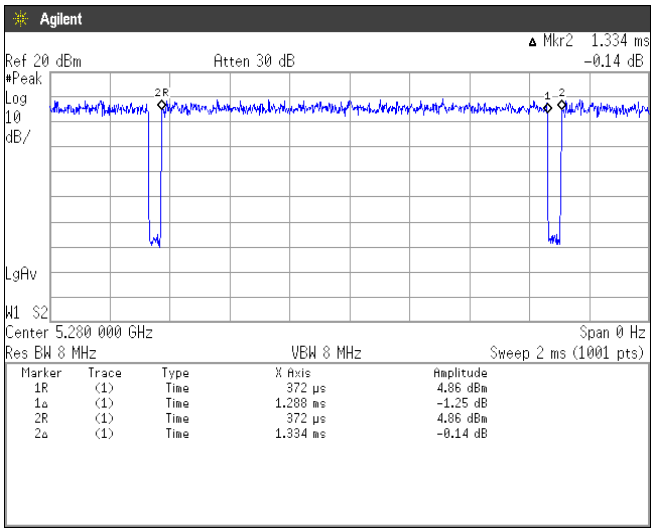
Japan

[IEEE802.11n (HT20)]

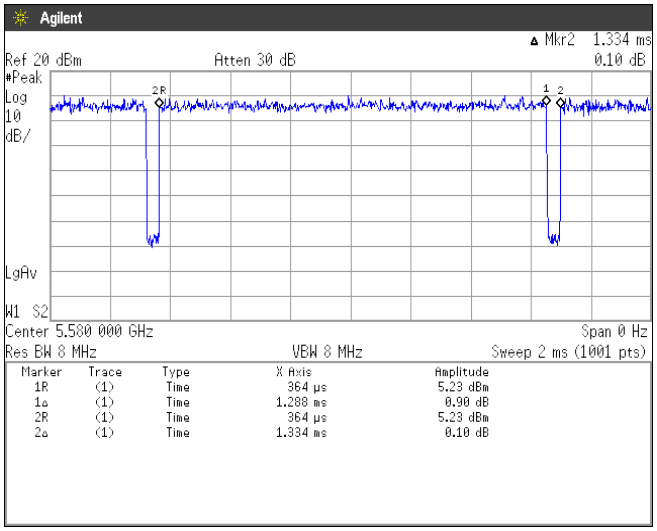
Channel: 40



Channel: 56



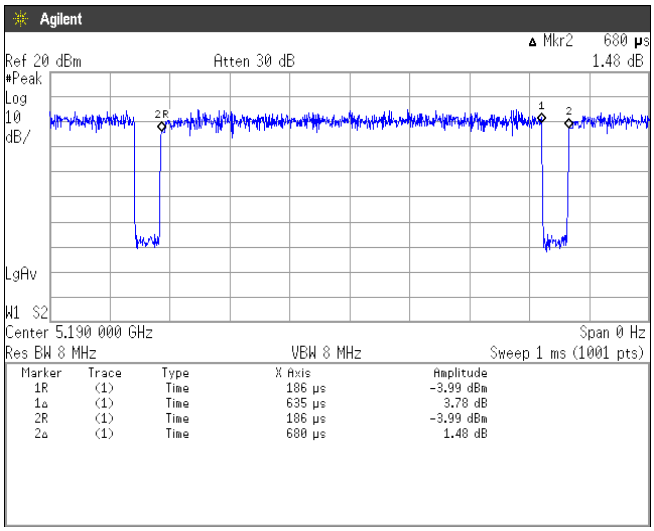
Channel: 116



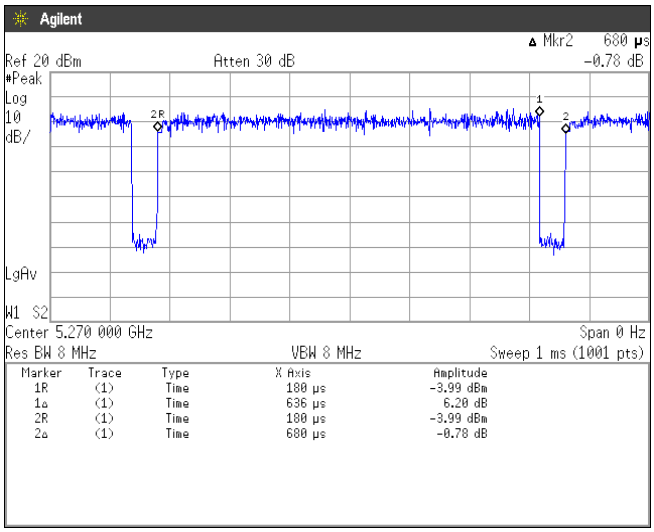
Japan

[IEEE802.11n (HT40)]

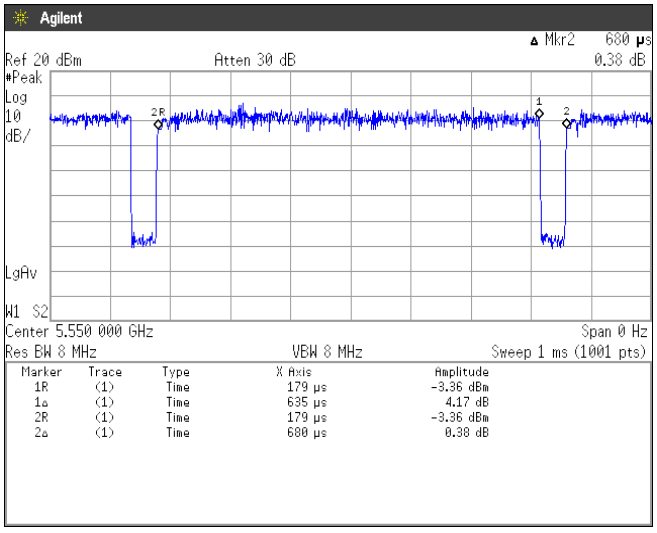
Channel: 38



Channel: 54



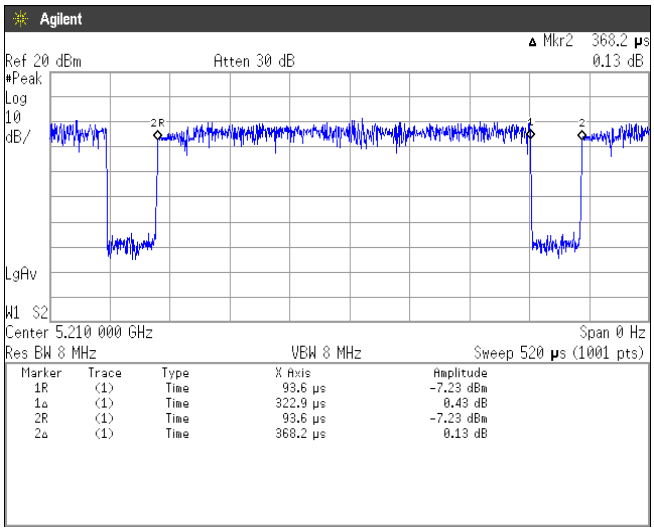
Channel: 110



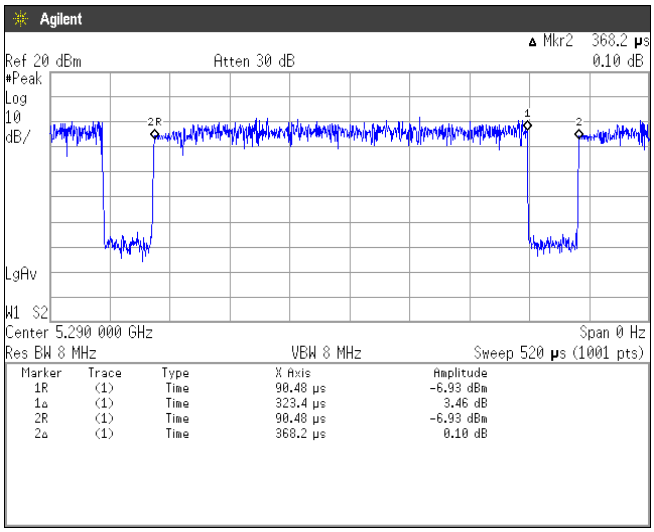
Japan

[IEEE802.11ac (HT80)]

Channel: 42



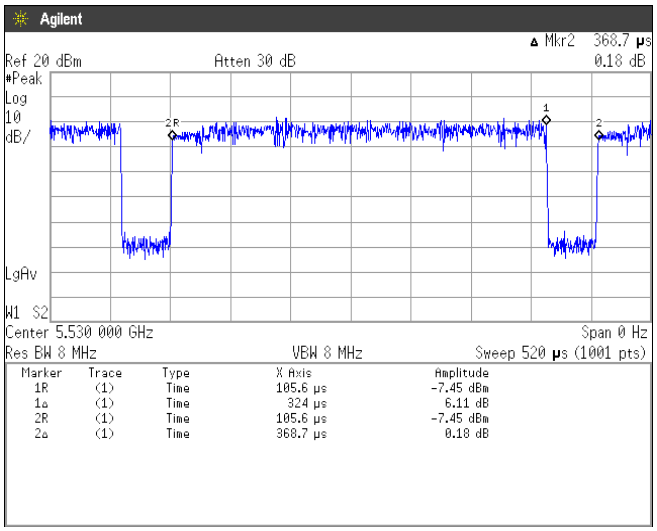
Channel: 58



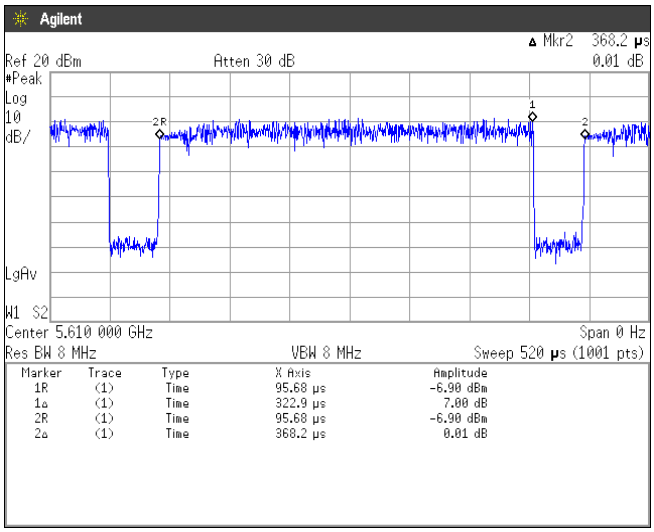
Japan

[IEEE802.11ac (HT80)]

Channel: 106



Channel: 122



Japan

5 Antenna requirement

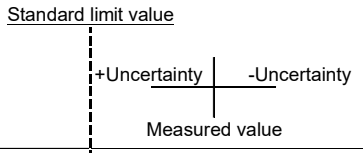
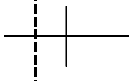
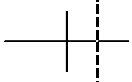
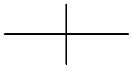
According to FCC section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
The antenna is a special antenna mounted inside of the EUT. Therefore, the EUT complies with the antenna requirement of FCC section 15.203.

Japan

6 Measurement uncertainty

Expanded uncertainties stated are calculated with a coverage Factor k=2.
Please note that these results are not taken into account when measurement uncertainty considerations contained in ETSI TR 100 028 Parts 1 and 2 determining compliance or non-compliance with test result.

Test item	Measurement uncertainty
Conducted emission, AMN (9 kHz – 150 kHz)	±3.8 dB
Conducted emission, AMN (150 kHz – 30 MHz)	±3.3 dB
Radiated emission (9kHz – 30 MHz)	±3.1 dB
Radiated emission (30 MHz – 1000 MHz)	±4.9 dB
Radiated emission (1 GHz – 6 GHz)	±4.8 dB
Radiated emission (6 GHz – 18 GHz)	±5.1 dB
Radiated emission (18 GHz – 40 GHz)	±5.8 dB
Radio Frequency	$\pm 1.4 * 10^{-8}$
RF power, conducted	±0.6 dB
Temperature	±0.6 °C
Humidity	±1.2 %
Voltage (DC)	±0.4 %
Voltage (AC, <10kHz)	±0.2 %

Judge	Measured value and standard limit value
PASS	**Case1**  Even if it takes uncertainty into consideration, a standard limit value is fulfilled.
	Case2  Although measured value is in a standard limit value, a limit value won't be fulfilled if uncertainty is taken into consideration.
FAIL	**Case3**  Although measured value exceeds a standard limit value, a limit value will be fulfilled if uncertainty is taken into consideration.
	Case4  Even if it takes uncertainty into consideration, a standard limit value isn't fulfilled.

Japan

7 Laboratory Information

Testing was performed and the report was issued at:

TÜV SÜD Japan Ltd. Yonezawa Testing Center

Address: 5-4149-7 Hachimanpara, Yonezawa-shi, Yamagata, 992-1128 Japan
Phone: +81-238-28-2881
Fax: +81-238-28-2888

Accreditation and Registration
NVLAP
LAB CODE: 200306-0

VLAC
Accreditation No.: VLAC-013

BSMI
Laboratory Code: SL2-IN-E-6018, SL2-A1-E-6018

Innovation, Science and Economic Development Canada

Site number	Facility	Expiration date
4224A-4	3 m Semi-anechoic chamber	27-November-2020
4224A-5	10 m Semi-anechoic chamber No. 1	27-November-2020
4224A-6	10 m Semi-anechoic chamber No. 2	14-December-2019

VCCI Council

Registration number	Expiration date
A-0166	03-July-2021

Appendix A. Test Equipment

Antenna port conducted test

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
Spectrum analyzer	Agilent Technologies	E4440A	US44302655	31-Aug-2020	05-Aug-2019
Attenuator	Weinschel	56-10	J4180	31-Jul-2020	18-Jul-2019
Power meter	ROHDE&SCHWARZ	NRP2	103269	31-Jul-2020	18-Jul-2019
Power sensor	ROHDE&SCHWARZ	NRP-Z81	102467	31-Jul-2020	18-Jul-2019
Temperature and humidity chamber	ESPEC	PL1KP	14007261	31-Dec-2019	07-Dec-2018
				30-Sep-2020	03-Sep-2019

Radiated emission

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
EMI Receiver	ROHDE&SCHWARZ	ESCI	100765	30-Sep-2019	20-Sep-2018
Spectrum analyzer	Agilent Technologies	E4447A	MY46180188	30-Apr-2020	16-Apr-2019
Spectrum analyzer	Agilent Technologies	E4440A	US40420937	31-Oct-2019	12-Oct-2018
Spectrum analyzer	Agilent Technologies	E4440A	US44302655	31-Jul-2019	02-Jul-2018
				31-Aug-2020	05-Aug-2019
Preamplifier	SONOMA	310	372170	30-Sep-2019	20-Sep-2018
Loop antenna	ROHDE&SCHWARZ	HFH2-Z2	100515	28-Mar-2020	07-Mar-2019
Attenuator	TOYO Connector	NA-PJ-6	N/A(S507)	31-Dec-2019	17-Dec-2018
Biconical antenna	Schwarzbeck	VHA9103/BBA9106	VHA91031308	31-May-2020	16-May-2019
Log periodic antenna	Schwarzbeck	UHALP9108A	0728	31-May-2020	16-May-2019
Attenuator	TAMAGAWA.ELEC	CFA-01/6dB	N/A(S465)	31-May-2020	17-May-2019
Attenuator	TAMAGAWA.ELEC	CFA-10/3dB	N/A(S503)	31-Jul-2020	17-Jul-2019
Preamplifier	TSJ	MLA-100M18-B02-40	1929118	31-Jan-2020	17-Jan-2019
Attenuator	AEROFLEX	26A-10	081217-08	31-Jan-2020	17-Jan-2019
Double ridged guide antenna	ETS LINDGREN	3117	00224193	31-Jan-2020	23-Jan-2019
Attenuator	Agilent Technologies	8491B	MY39268633	31-Mar-2020	08-Mar-2019
DRGH antenna	A.H.Systems Inc.	SAS-574	469	31-Aug-2019	24-Aug-2018
Preamplifier	TSJ	MLA-1840-B03-35	1240332	31-Aug-2019	24-Aug-2018
Notch filter	Micro-Tronics	BRM50716	006	31-May-2020	16-May-2019
Microwave cable	HUBER+SUHNER	SUCOFLEX104/9m	MY30037/4	31-Jan-2020	16-Jan-2019
		SUCOFLEX104/1m	my24610/4	31-Jan-2020	16-Jan-2019
		SUCOFLEX104/8m	SN MY30031/4	31-Jan-2020	16-Jan-2019
		SUCOFLEX104/1.5m	MY32976/4	31-Jan-2020	16-Jan-2019
		SUCOFLEX104/1.5m	MY19309/4	31-Jan-2020	16-Jan-2019
		SUCOFLEX104/7m	41625/6	31-Jan-2020	16-Jan-2019
PC	DELL	DIMENSION E521	75465BX	N/A	N/A
Software	TOYO Corporation	EP5/RE-AJ	0611193/V5.6.0	N/A	N/A
Absorber	RIKEN	PFP30	N/A	N/A	N/A
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-NSA)	31-May-2020	14-May-2019
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-SVSWR)	31-May-2020	13-May-2019

Conducted emission at mains port

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
EMI Receiver	ROHDE&SCHWARZ	ESCI	100765	30-Sep-2019	20-Sep-2018
Attenuator	HUBER+SUHNER	6810.01.A	N/A (S411)	31-Jan-2020	17-Jan-2019
Line impedance stabilization network for EUT	Kyoritsu Electrical Works, Ltd.	KNW-407F2	12-17-110-2	31-May-2020	16-May-2019
Coaxial cable	FUJIKURA	5D-2W/4m	N/A (S350)	31-Jan-2020	16-Jan-2019
Coaxial cable	FUJIKURA	5D-2W/1m	N/A (S193)	31-Jan-2020	16-Jan-2019
Coaxial cable	HUBER+SUHNER	RG214/U/10m	N/A (S194)	31-Jan-2020	16-Jan-2019
PC	DELL	DIMENSION	75465BX	N/A	N/A
Software	TOYO Corporation	EP5/CE-AJ	0611193/V5.4.11	N/A	N/A

*: The calibrations of the above equipment are traceable to NIST or equivalent standards of the reference organizations.