Report on the RF Testing of:

KYOCERA Corporation
Mobile Phone, Model: JA53
FCC ID: JOYJA53

In accordance with FCC Part 15 Subpart C

TÜV SÜD Japan

Add value.
Inspire trust.

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Hiroaki Suzuki	Deputy Manager of RF Group	Approved Signatory	14 FEB 2019

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Japan Ltd. document control rules.

EXECUTIVE SUMMARY
A sample(s) of this product was tested and found to be compliant with FCC Part 15 Subpart C.

NVLAP TESTING
NVLAP LAB CODE 200308-0

ilac-MRA

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Japan

Contents

Japan

1 Summary of Test

1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPD-TR-19046-0	First Issue	Refer to the cover page

1.2 Standards

CFR47 FCC Part 15 Subpart C

1.3 Test methods

ANSI C63.10-2013

1.4 Deviation from standards

None

1.5 List of applied test(s) of the EUT

Test item section	Test item	Condition	Result	Remark
15.247(a)(1)	20dB Bandwidth	Conducted	PASS	-.
15.247(a)(1)	Carrier Frequency Separation	Conducted	PASS	-.
15.247(a)(1)(iii)	Number of Hopping Frequencies	Conducted	PASS	-.
15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	Conducted	PASS	-.
15.247(b)(1)	Maximum Peak Output Power	Conducted	PASS	-
15.247(d)	Band Edge Compliance of RF Conducted Emissions	Conducted	PASS	-
15.247(d) 15.205 15.209	Spurious Emissions	Conducted Radiated	PASS	-
15.247(d) 15.205 15.209	Restricted Bands of Operation	Radiated	PASS	-
15.207	AC Power Line Conducted Emissions	Conducted	PASS	-

1.6 Test information

None

1.7 Test set up

Table-top

1.8 Test period

24-January-2018 - 06-February-2019

Japan

2 Equipment Under Test

2.1 EUT information

Applicant	KYOCERA Corporation
	Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku Yokohama-shi, Kanagawa, Japan
	Phone: +81-45-943-6253 Fax: +81-45-943-6314
Equipment Under Test (EUT)	Mobile Phone
Model number	JA53
Serial number	N/A
Trade name	Kyocera
Number of sample(s)	1
EUT condition	Pre-Production
Power rating	Battery: DC 3.8 V
Size	(W) 51.3 × (D) 17.4 × (H) 112.3 mm
Environment	Indoor and Outdoor use
Terminal limitation	-20 ˚C to 60 ˚C
RF Specification	
Protocol	Bluetooth 4.1 + EDR
Frequency range	2402 MHz-2480 MHz
Number of RF Channels	79 Channels
Modulation method/Data rate	FHSS: GFSK (1 Mbps), π/4-DQPSK (2 Mbps), 8-DPSK (3 Mbps)
Channel separation	1 MHz
Conducted power	7.211 mW (DH5)
	9.290 mW (3-DH5)
Antenna type	Internal antenna
Antenna gain	1.98 dBi

2.2 Modification to the EUT

The table below details modifications made to the EUT during the test project.

Modification State	Description of Modification	Modification fitted by	Date of Modification
Model: JA53, Serial Number: N/A			
0	As supplied by the applicant	Not Applicable	Not Applicable

Japan

2.3 Variation of family model(s)

2.3.1 List of family model(s)

JA53 has model with camera and without camera.

2.3.2 Reason for selection of EUT

Not applicable

2.4 Operating channels and frequencies

Channel	Frequency [MHz]	Channel	Frequency [MHz]	Channel	Frequency [MHz]
0	2402	27	2429	54	2456
1	2403	28	2430	55	2457
2	2404	29	2431	56	2458
3	2405	30	2432	57	2459
4	2406	31	2433	58	2460
5	2407	32	2434	59	2461
6	2408	33	2435	60	2462
7	2409	34	2436	61	2463
8	2410	35	2437	62	2464
9	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

Japan

2.5 Operating mode

The EUT had been tested under operating condition.
There are three channels have been tested as following:

Tested Channel	Frequency [MHz]
Low	2402
Middle	2441
High	2480

The pre-test has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

Tested Channel	Modulation Technology	Modulation Type	Packet Type
Low, Middle, High	FHSS	GFSK	DH5
Low, Middle, High	FHSS	8-DPSK	3-DH5

The field strength of spurious emissions was measured at each position of all three axis X, Y and Z to compare the level, and the maximum noise.
The worst emission was found in X-axis, Open and the worst case recorded.

2.6 Operating flow

[Tx mode]
i) Test program setup to the DM tool
ii) Select a Test mode
Operating frequency: Channel Low: 2402 MHz, Channel Middle: 2441 MHz, Channel High: 2480 MHz
iii) Start test mode

[Rx mode]
i) Test program setup to the DM tool
ii) Select a Test mode
Operating frequency: Channel Low: 2402 MHz, Channel Middle: 2441 MHz, Channel High: 2480 MHz
iii) Start test mode

Japan

3 Configuration of Equipment

Numbers assigned to equipment on the diagram in “3.2 System configuration” correspond to the list in “3.1 Equipment used”.

3.1 Equipment used

No.	Equipment	Company	Model No.	Serial No.	FCC ID/DoC	Comment
1	Mobile Phone	KYOCERA	JA53	N/A	JOYJA53	EUT
2	AC Adapter	au	N/A	N/A	N/A	*

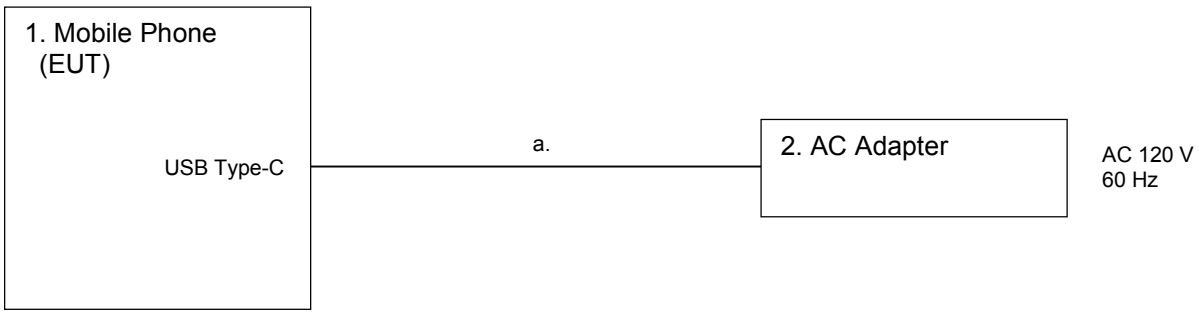
*:AC power line Conducted Emission Test.

3.2 Cable(s) used

No.	Equipment	Length[m]	Shield	Connector	Comment
a	USB cable (for AC Adapter)	1.0	Yes	Metal	*

*:AC power line Conducted Emission Test.

3.3 System configuration



Japan

4 Test Result

4.1 20dB Bandwidth

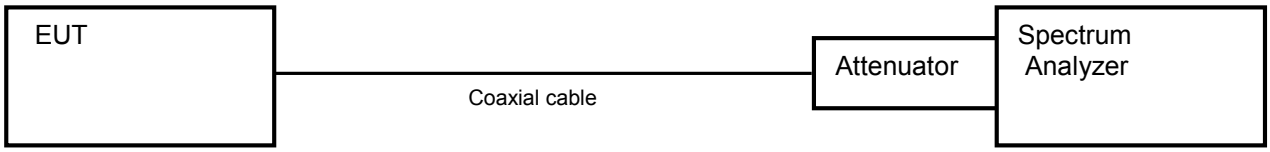
4.1.1 Measurement procedure

[FCC 15.247(a)(1)]

The bandwidth at 6 dB down from the highest inband spectral density is measured with 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;
a) Span = 2-3 times the 20 dB bandwidth
b) RBW ≥ 1% of the 20 dB bandwidth
c) VBW ≥ RBW
d) Sweep time = auto-couple
e) Detector = peak
f) Trace mode = max hold

- Test configuration



4.1.2 Limit

None

4.1.3 Measurement result

Date : 24-January-2019
Temperature : 24.5 [˚C]
Humidity : 35.6 [%]
Test place : Shielded room No.4

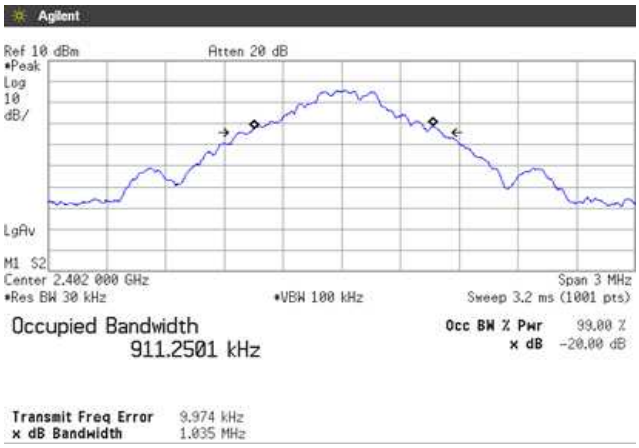
Test engineer : Taiki Watanabe

Channel	Frequency [MHz]	20 dB bandwidth [MHz]	
		DH5	3-DH5
Low	2402	1.035	1.334
Middle	2441	1.031	1.328
High	2480	1.029	1.334

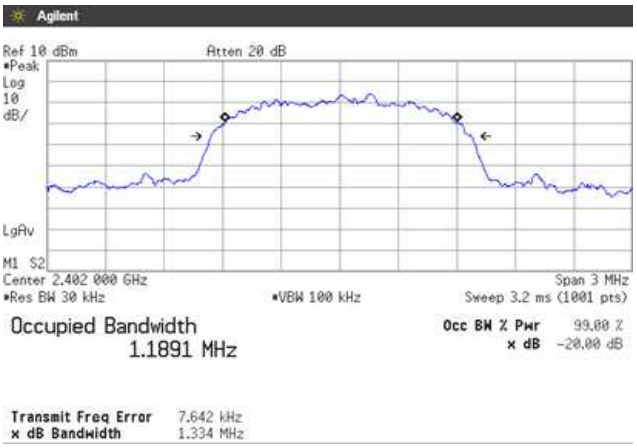
Japan

4.1.4 Trace data

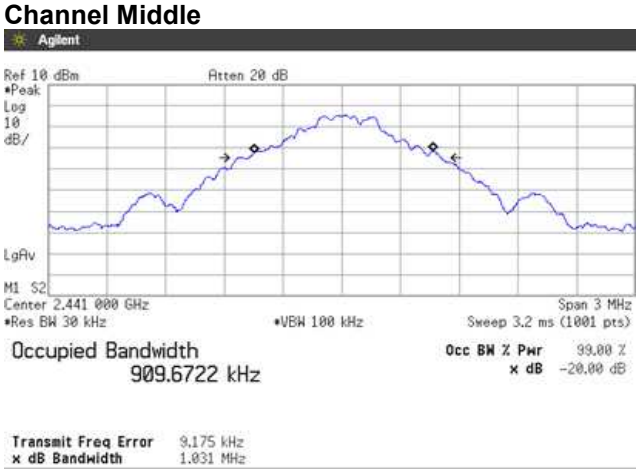
[DH5]
Channel Low



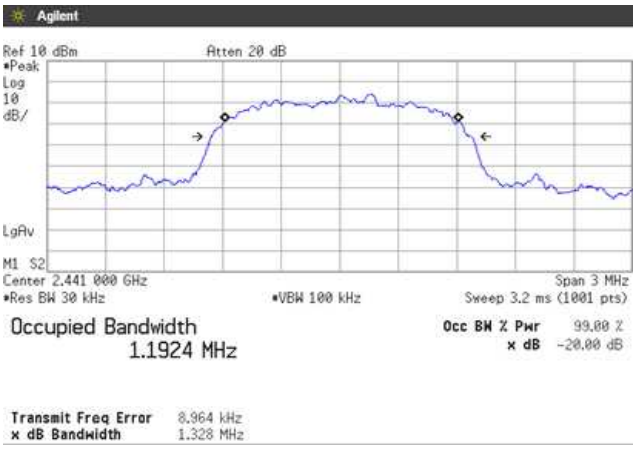
[3-DH5]



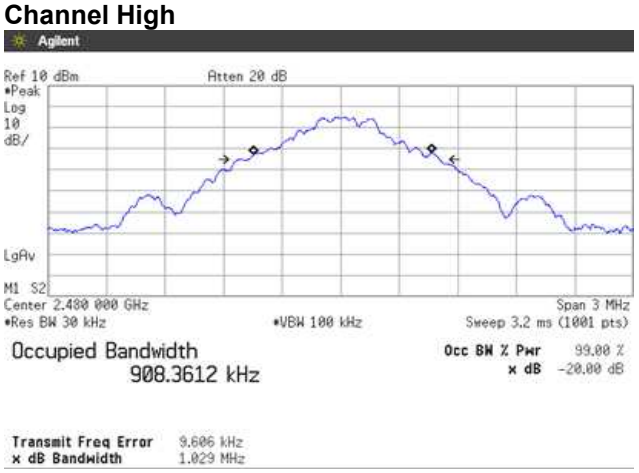
[DH5]
Channel Middle



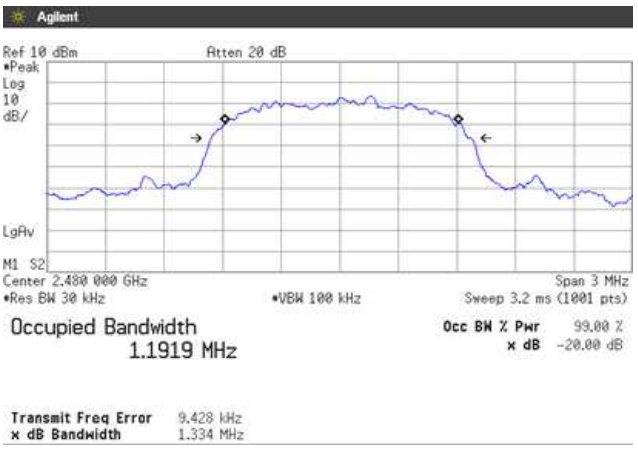
[3-DH5]



[DH5]
Channel High



[3-DH5]



Japan

4.2 Carrier Frequency Separation

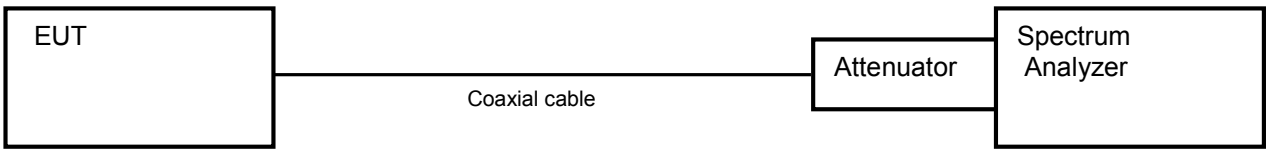
4.2.1 Measurement procedure

[FCC 15.247(a)(1)]

The adjacent channel interval 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;
g) Span = wide enough to capture the peaks of two adjacent channels
h) RBW ≥ 1% of the span
i) VBW ≥ RBW
j) Sweep time = auto-couple
k) Detector = peak
l) Trace mode = max hold

- Test configuration



4.2.2 Limit

System shall have hopping channel carrier frequencies separated by a minimum of, 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

4.2.3 Measurement result

Date : 24-January-2019
Temperature : 24.5 [˚C]
Humidity : 35.6 [%]
Test place : Shielded room No.4

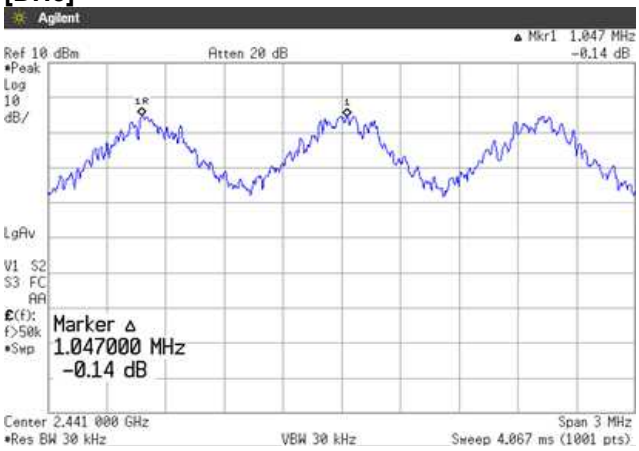
Test engineer : Taiki Watanabe

Battery Full

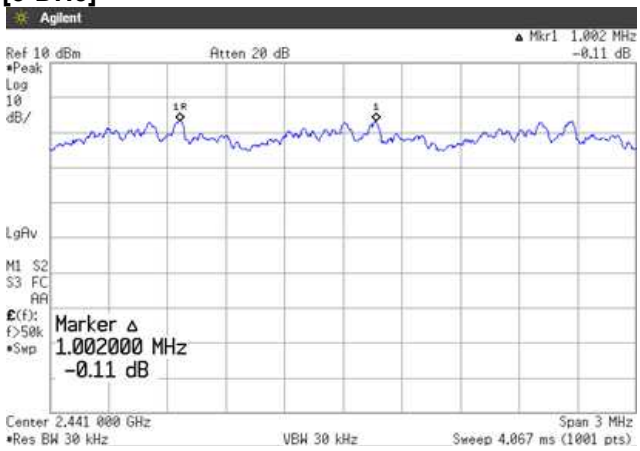
Packet type	Channel separation (MHz)	Limit (MHz)	Result
DH5	1.047	>two-thirds of the 20dB Bandwidth = 690kHz	PASS
3-DH5	1.002	>two-thirds of the 20dB Bandwidth = 889kHz	PASS
DH5(AFH)	1.002	>two-thirds of the 20dB Bandwidth = 690kHz	PASS
3-DH5(AFH)	1.002	>two-thirds of the 20dB Bandwidth = 889kHz	PASS

4.2.4 Trace data

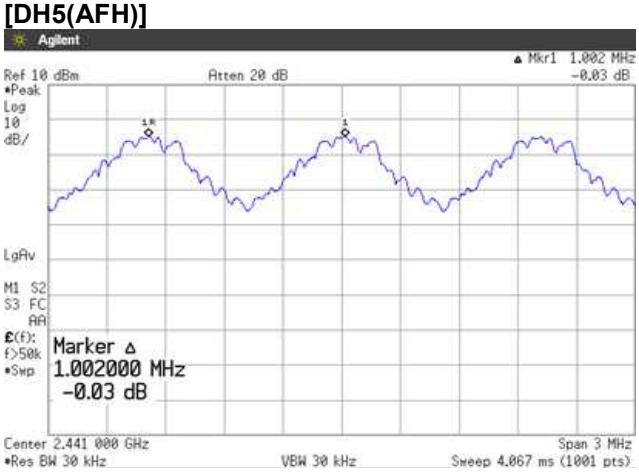
[DH5]



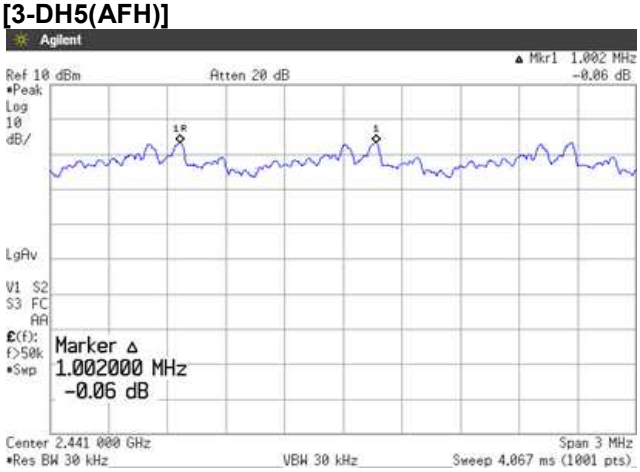
[3-DH5]



[DH5(AFH)]



[3-DH5(AFH)]



Japan

4.3 Number of Hopping Frequencies

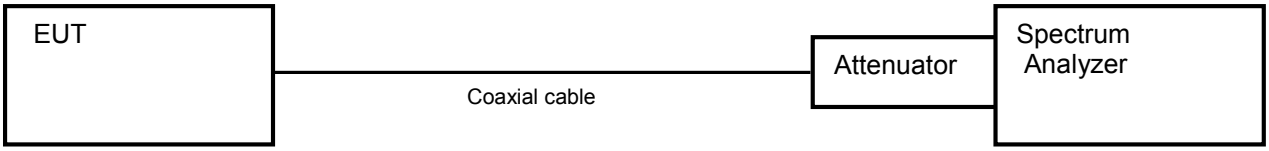
4.3.1 Measurement procedure

[FCC 15.247(a)(1)(iii)]

The number of hopping channels 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;
a) Span = the frequency band of operation
b) RBW ≥ 1% of the Span
c) VBW ≥ RBW
d) Sweep time = auto-couple
e) Detector = peak
f) Trace mode = max hold

- Test configuration



4.3.2 Limit

Shall have more than 15 channels.

4.3.3 Measurement result

Date : 24-January-2019
Temperature : 24.5 [˚C]
Humidity : 35.6 [%]
Test place : Shielded room No.4

Test engineer : Taiki Watanabe

FHSS

Number of channels	Limit	Result
79	≥15 channel	PASS

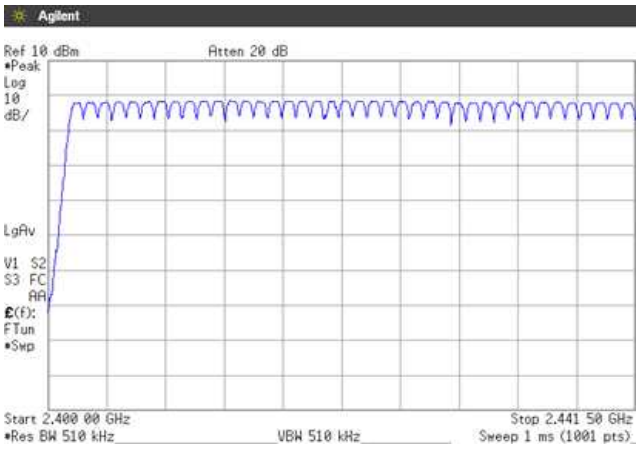
AFH

Channel	Number of channels	Limit	Result
Low	20	≥15 channel	PASS
Middle	20	≥15 channel	PASS
High	20	≥15 channel	PASS

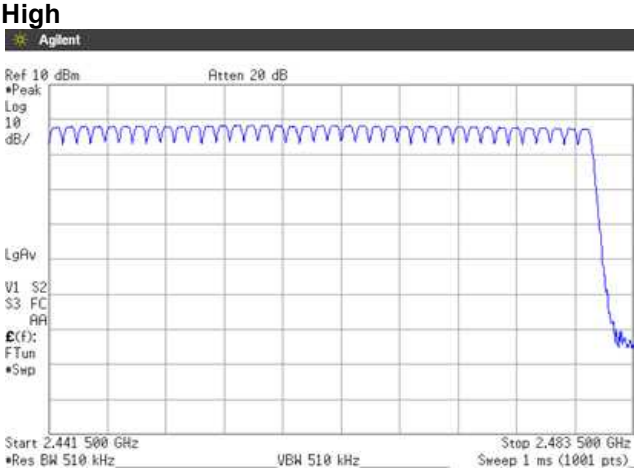
4.3.4 Trace data

[DH5]

Low

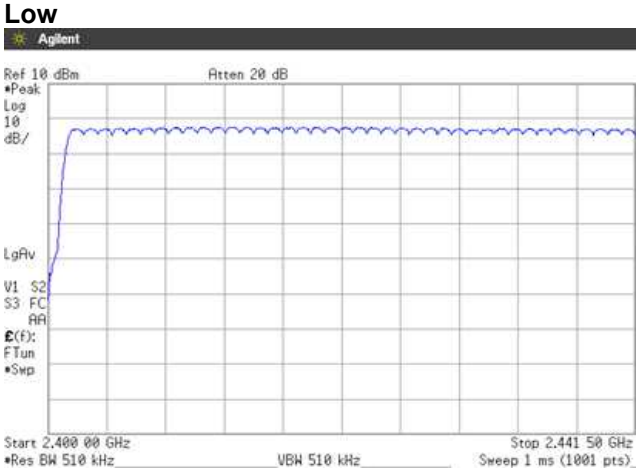


High

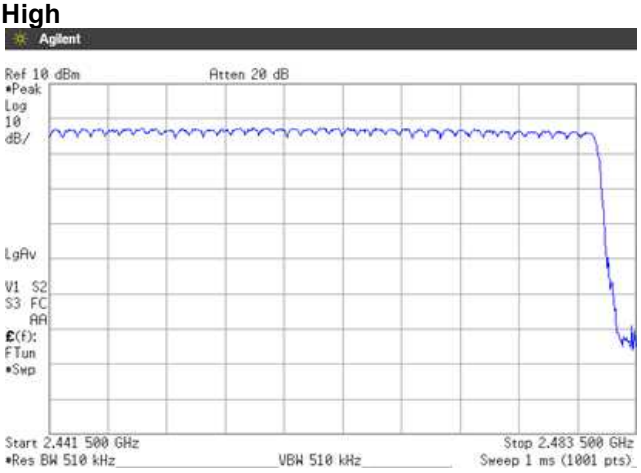


[3-DH5]

Low

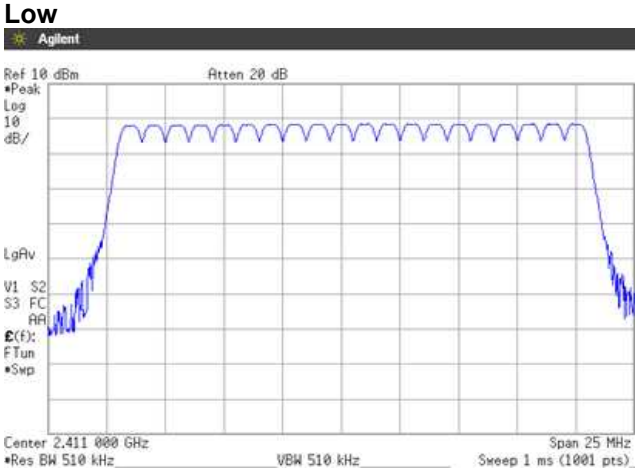


High

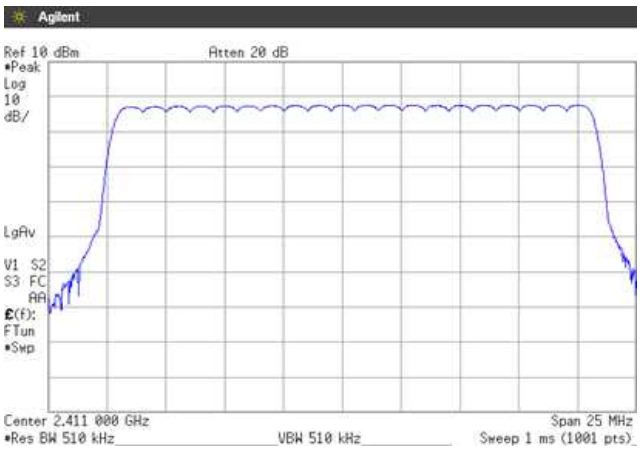


[DH5(AFH)]

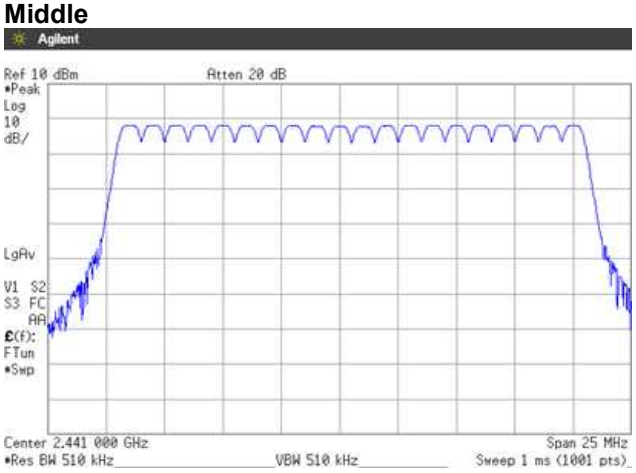
Low

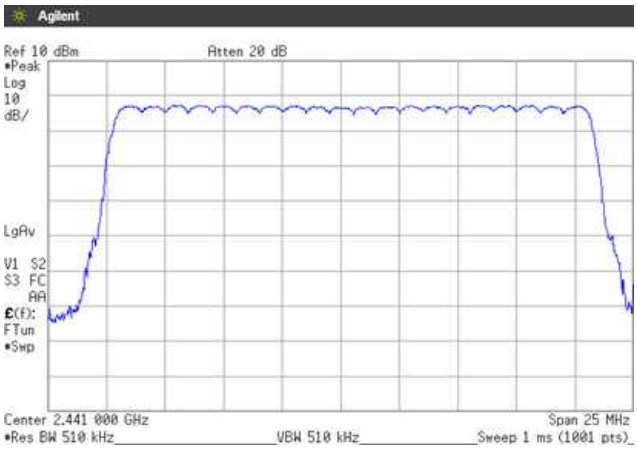


[3-DH5(AFH)]



Middle





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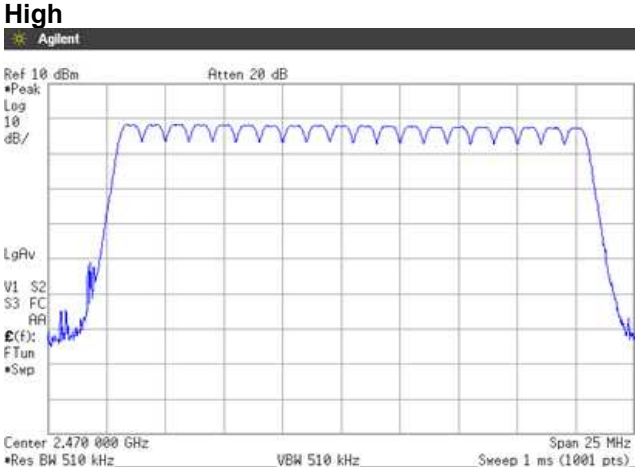
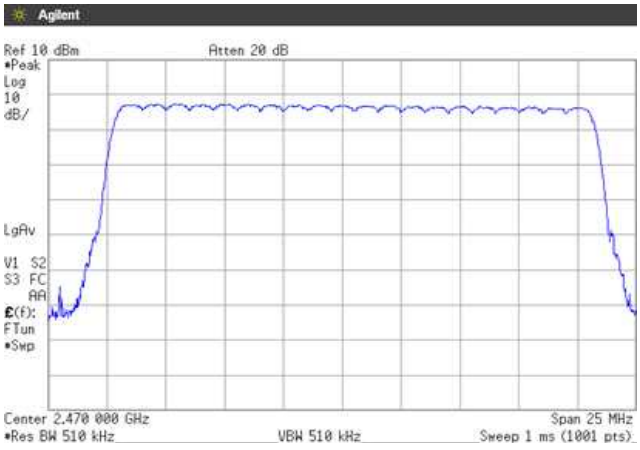




Japan

4.4 Time of Occupancy (Dwell Time)

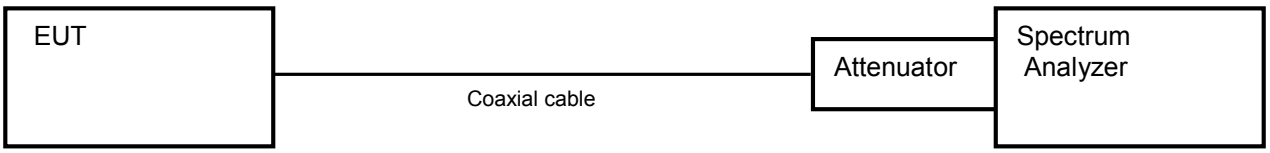
4.4.1 Measurement procedure

[FCC 15.247(a)(1)(iii)]

The time occupancy of hopping channel 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;
a) Span = Zero span, centered on a hopping channel
b) RBW = 1 MHz
c) VBW ≥ RBW
d) Sweep time = auto-couple
e) Detector = peak
f) Trace mode = Single

- Test configuration



4.4.2 Limit

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

Japan

4.4.3 Measurement result

Date : 29-January-2019
Temperature : 21.5 [˚C]
Humidity : 30.0 [%]
Test place : Shielded room No.4

Test engineer : Taiki Watanabe

FHSS

Packet type	Channel	Frequency (MHz)	Dwell time (ms)	Occupancy time of 31.6 seconds (s)	Limit	Result
DH5	Low	2402.0	2.880	0.307	<0.4s	PASS
	Middle	2441.0	2.880	0.307	<0.4s	PASS
	High	2480.0	2.880	0.307	<0.4s	PASS
3-DH5	Low	2402.0	2.890	0.308	<0.4s	PASS
	Middle	2441.0	2.890	0.308	<0.4s	PASS
	High	2480.0	2.880	0.307	<0.4s	PASS

AFH

Packet type	Channel	Frequency (MHz)	Dwell time (ms)	Occupancy time of 8 seconds (s)	Limit	Result
DH5(AFH)	Low	2402.0	2.880	0.154	<0.4s	PASS
	Middle	2441.0	2.890	0.154	<0.4s	PASS
	High	2480.0	2.880	0.154	<0.4s	PASS
3-DH5(AFH)	Low	2402.0	2.880	0.154	<0.4s	PASS
	Middle	2441.0	2.880	0.154	<0.4s	PASS
	High	2480.0	2.880	0.154	<0.4s	PASS

FHSS
DH5/3-DH5 = Dwell time (ms) x 1600 / 6 / 79 x 31.6

AFH
DH5/3-DH5 = Dwell time (ms) x 800 / 6 / 20 x 8

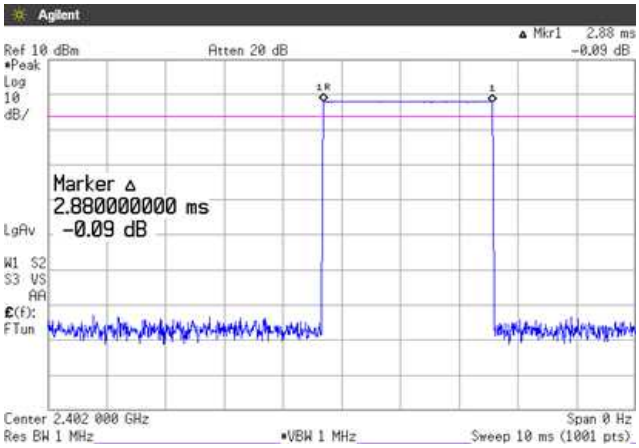
The hopping rates of Bluetooth devices change with different types of payload. The longer the payload is, the slower the hopping rate. The hopping rate scenario is defined in Bluetooth core specification.
Calculation:
Occupancy time of 31.6 seconds* = time domain slot length x hop rate / number of hopper channel / 79 /x 31.6
Ex.) for FHSS mode Channel Low,3- DH5 = 2.880ms x 1600 / 6/ 79 x 31.6 = 307ms

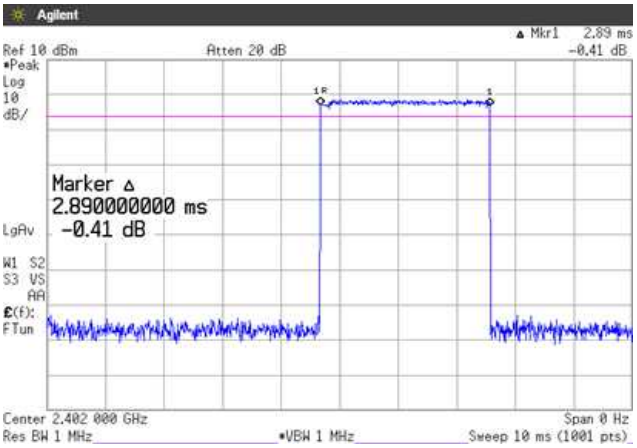
4.4.4 Trace data

FHSS

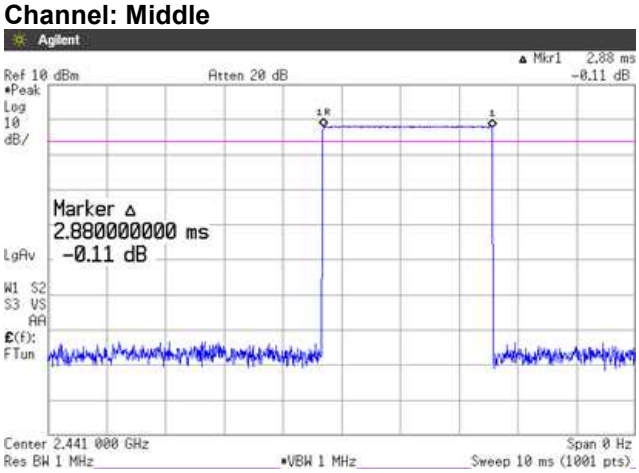
[DH5] **[3-DH5]**

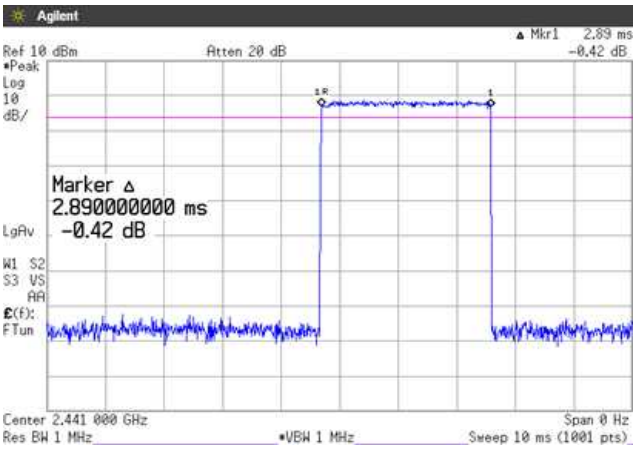
Channel: Low



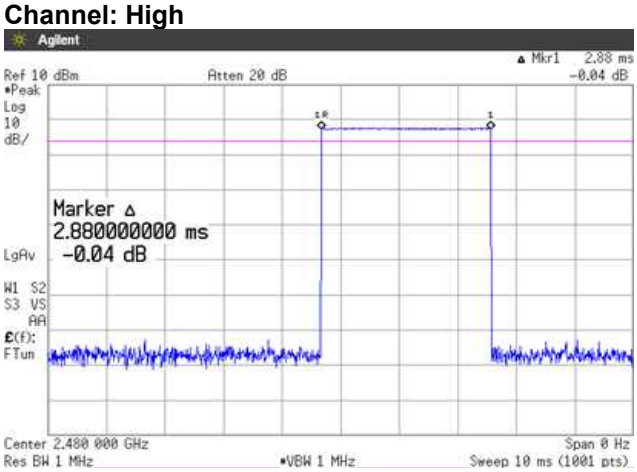


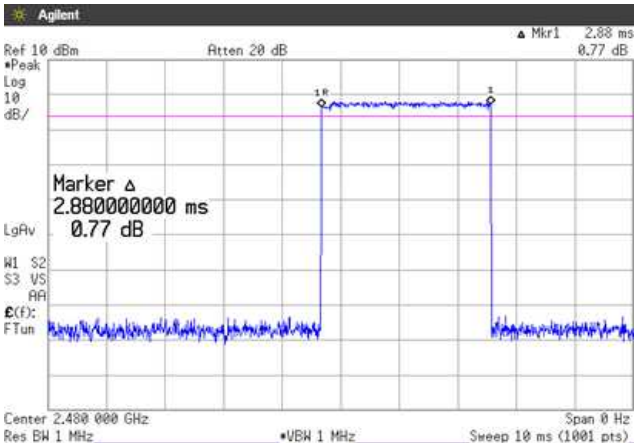
Channel: Middle





Channel: High



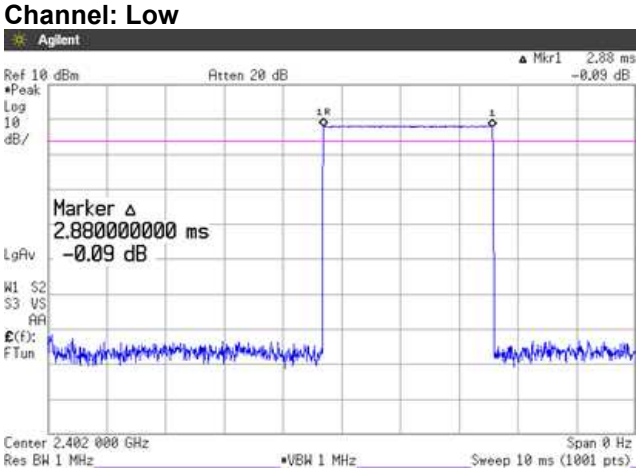


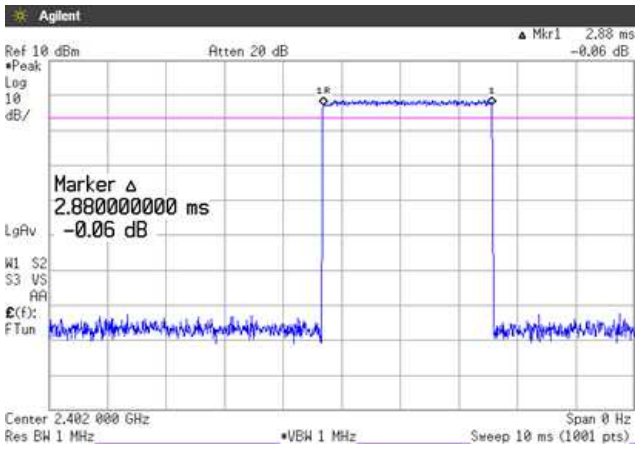
Japan

FHSS

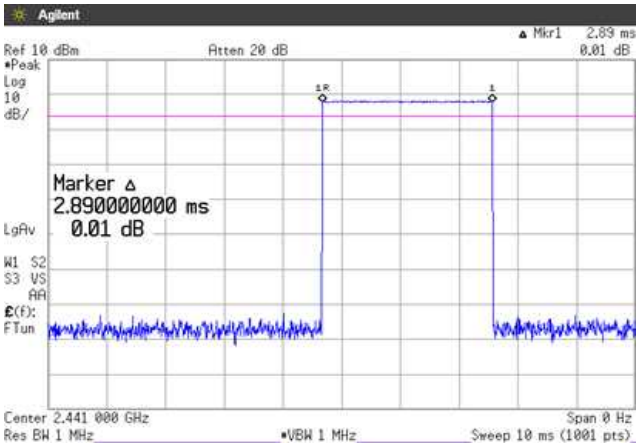
[DH5] **[3-DH5]**

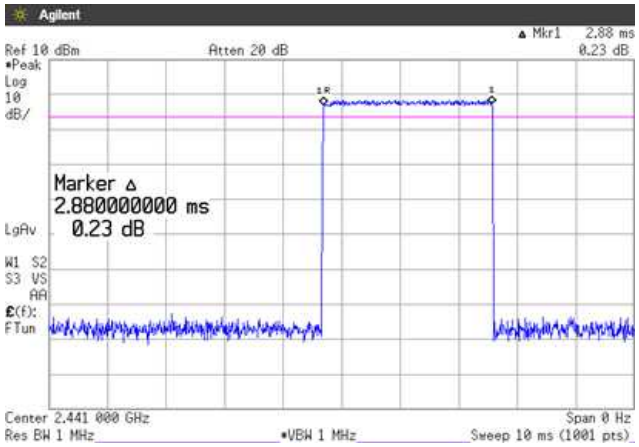
Channel: Low



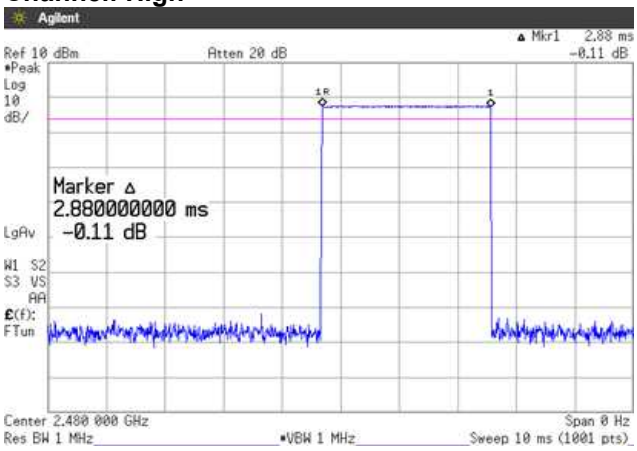


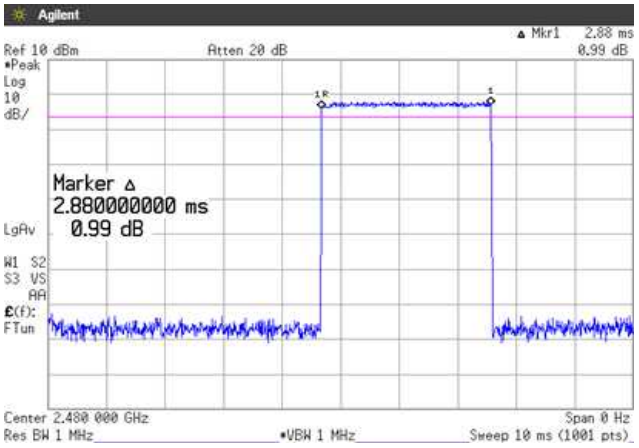
Channel: Middle





Channel: High





Japan

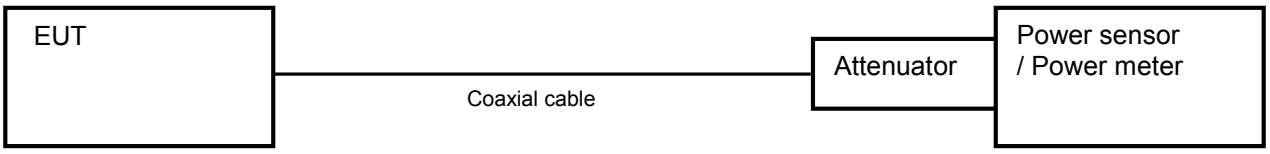
4.5 Maximum Peak Output Power

4.5.1 Measurement procedure

[FCC 15.247(b)(1)]

The peak power is measured with a power sensor connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

- Test configuration



4.5.2 Limit

0.125 W or less

4.5.3 Measurement result

Date : 24-January-2019
Temperature : 24.5 [˚C]
Humidity : 35.6 [%]
Test place : Shielded room No.4

Test engineer : Taiki Watanabe

Battery Full

Packet type	Channel	Center Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Peak Output Power (mW)	Limit (mW)	Result
DH5	Low	2402	-1.90	10.48	8.58	7.211	≦125	PASS
	Middle	2440	-1.93	10.48	8.55	7.161	≦125	PASS
	High	2480	-2.50	10.48	7.98	6.281	≦125	PASS
3-DH5	Low	2402	-0.80	10.48	9.68	9.290	≦125	PASS
	Middle	2440	-0.83	10.48	9.65	9.226	≦125	PASS
	High	2480	-1.27	10.48	9.21	8.337	≦125	PASS

Calculation;
Reading (dBm) + Factor (dB) = Level (dBm)
10logP = Level (dBm)
$P = 10^{(\text{Maximum Peak Output Power} / 10)}$ (mW)

Japan

4.6 Band Edge Compliance of RF Conducted Emissions

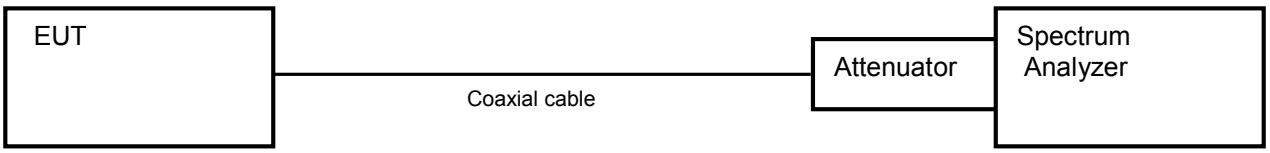
4.6.1 Measurement procedure

[FCC 15.247(d)]

The Band Edge 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;
a) Span = Arbitrary setting.(Setting suitable for measurement.)
b) RBW = 1 % of the span
c) VBW ≥ RBW
d) Sweep time = auto-couple
e) Detector = peak
f) Trace mode = max hold

- Test configuration



4.6.2 Limit

In any 100kHz bandwidth outside the frequency band the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

Japan

4.6.3 Measurement result

Date : 29-January-2019
Temperature : 21.5 [˚C]
Humidity : 30.0 [%] Test engineer :
Test place : Shielded room No.4 Taiki Watanabe

[Hopping]

Packet Type	Channel	Frequency (MHz)	RF Power Level (dBm)	Band-edge Frequency (MHz)	Band-edge Level (dBm)	Difference Level (dBm)	Limit (dBm)	Result
DH5	Low	2402	-1.53	2399.60	-66.49	64.96	At least 20dB below from peak of RF	PASS
	High	2480	-1.72	2488.10	-70.33	68.61		PASS
3-DH5	Low	2402	-2.51	2399.95	-59.97	57.46		PASS
	High	2480	-2.80	2483.60	-69.09	66.29		PASS

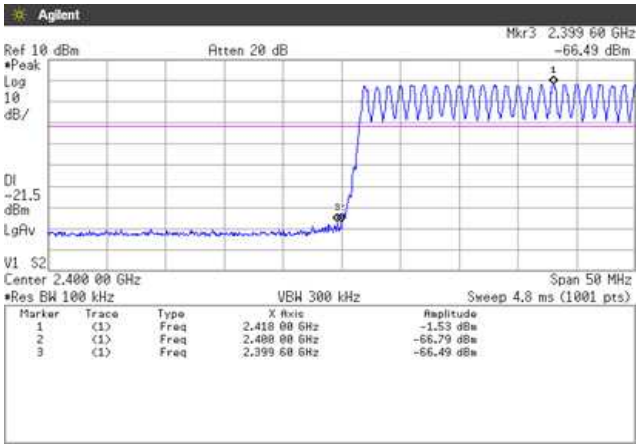
[No Hopping]

Packet Type	Channel	Frequency (MHz)	RF Power Level (dBm)	Band-edge Frequency (MHz)	Band-edge Level (dBm)	Difference Level (dBm)	Limit (dBm)	Result
DH5	Low	2402	-2.06	2399.90	-59.22	57.16	At least 20dB below from peak of RF	PASS
	High	2480	-2.76	2483.95	-67.37	64.61		PASS
3-DH5	Low	2402	-3.16	2399.80	-59.13	55.97		PASS
	High	2480	-3.77	2484.75	-68.43	64.66		PASS

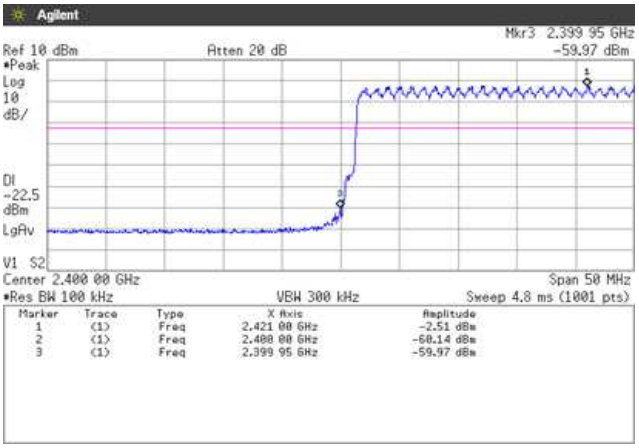
Japan

4.6.4 Trace data

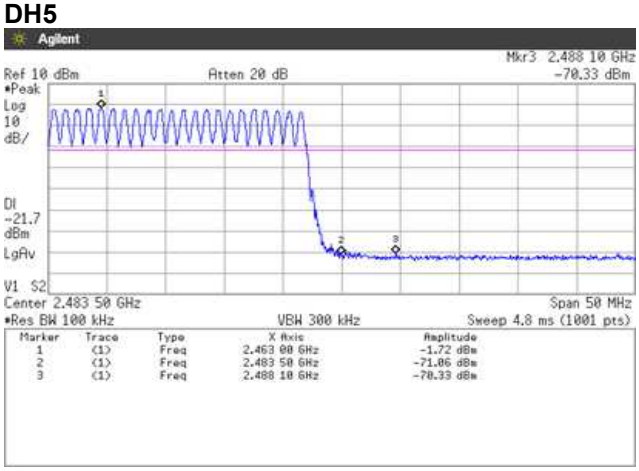
[Hopping]
Channel Low
DH5



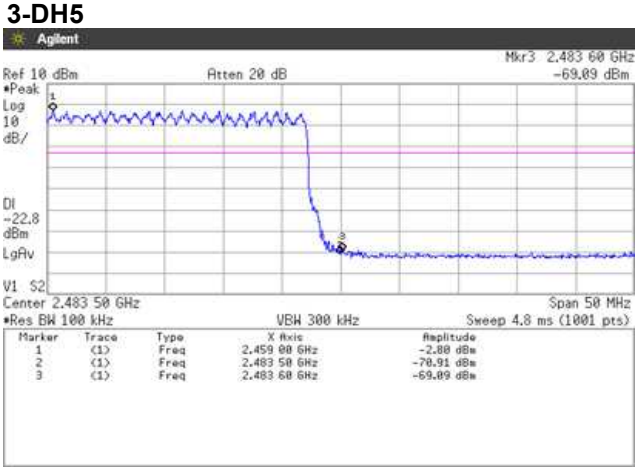
3-DH5



Channel High
DH5

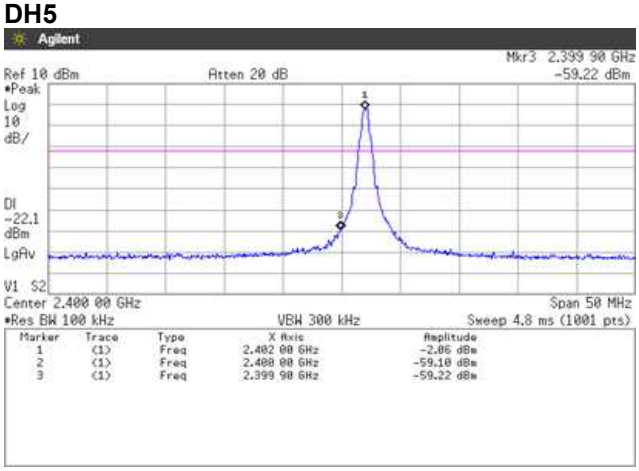


3-DH5

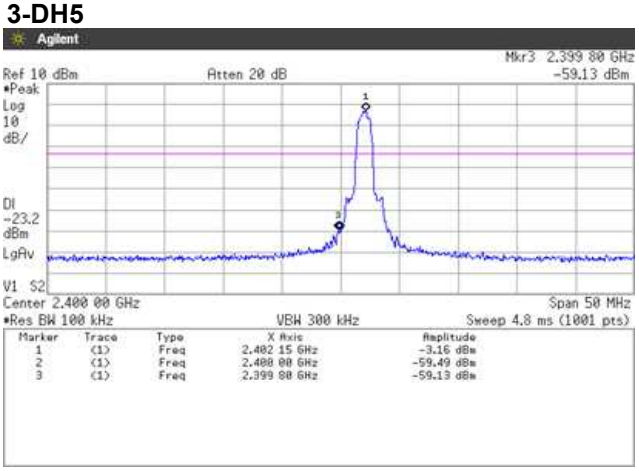


Japan

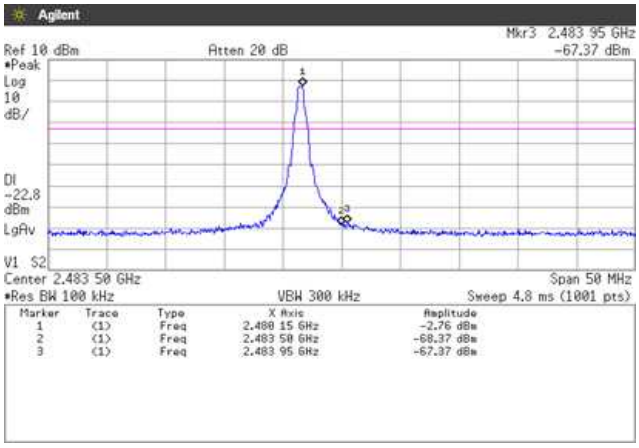
[No Hopping]
Channel Low
DH5



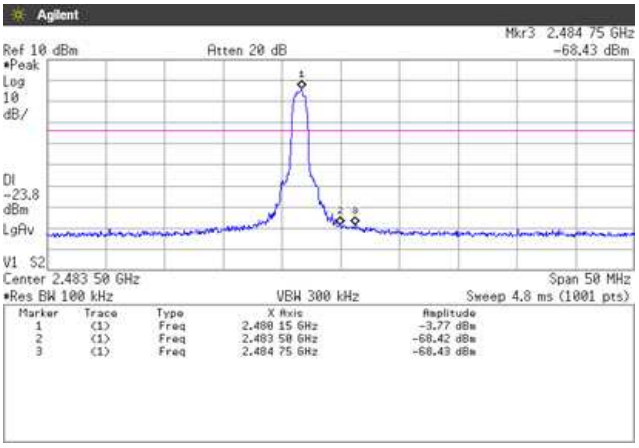
3-DH5



Channel High
DH5



3-DH5



Japan

4.7 Spurious emissions - Conducted -

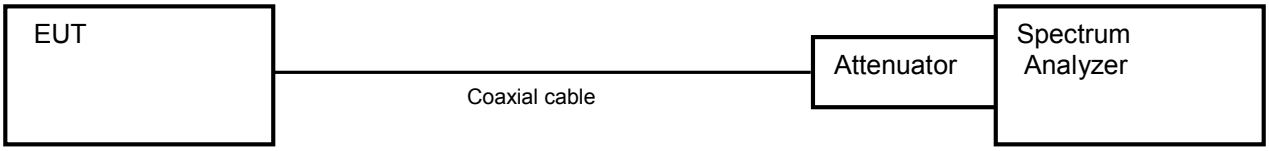
4.7.1 Measurement procedure

[FCC 15.247(d)]

The Spurious emissions (Conducted) are 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;
a) Span = wide enough to fully capture the emission being measured
b) RBW = 100 kHz
c) VBW ≥ RBW
d) Sweep time = auto-couple
e) Detector = peak
f) Trace mode = max hold

- Test configuration



4.7.2 Limit

In any 100kHz bandwidth outside the frequency band the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

4.7.3 Measurement result

Date : 29-January-2019
Temperature : 21.5 [˚C]
Humidity : 30.0 [%]
Test place : Shielded room No.4

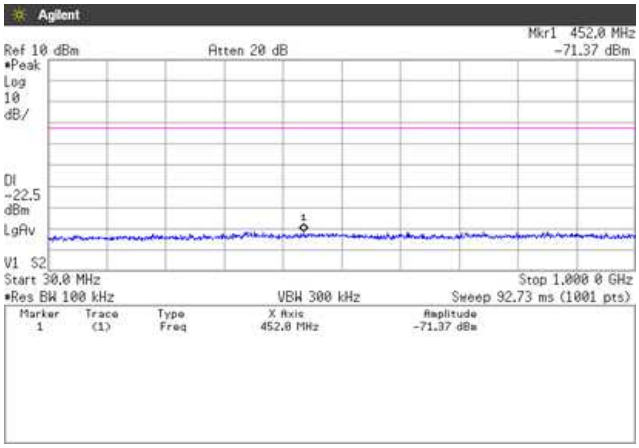
Test engineer : Taiki Watanabe

Channel	Frequency [MHz]	Limit [dB]	Results Chart	Result
Low	2402	At least 20dB below from peak of RF	See the trace Data	PASS
Middle	2441	At least 20dB below from peak of RF	See the trace Data	PASS
High	2480	At least 20dB below from peak of RF	See the trace Data	PASS

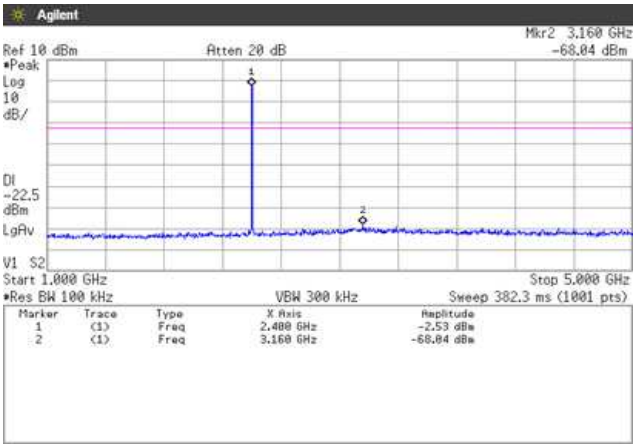
4.7.4 Trace data

[DH5]
Channel Low

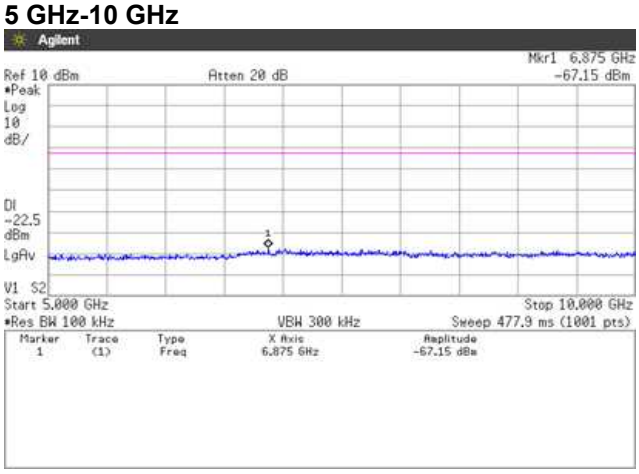
30 MHz-1 GHz



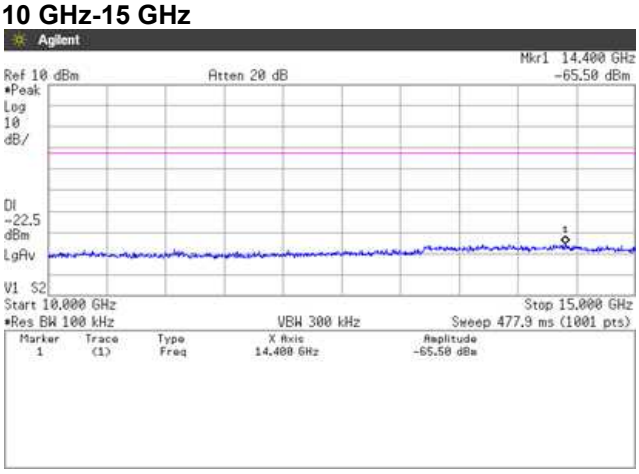
1 GHz-5 GHz



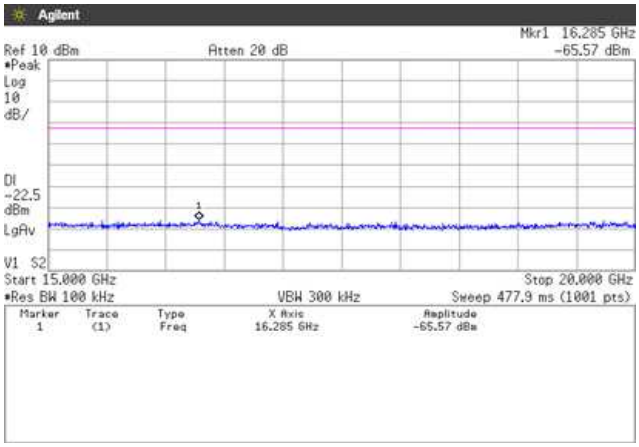
5 GHz-10 GHz



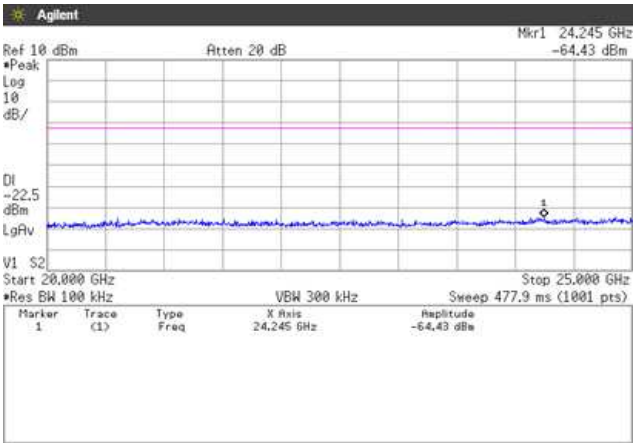
10 GHz-15 GHz



15 GHz-20 GHz

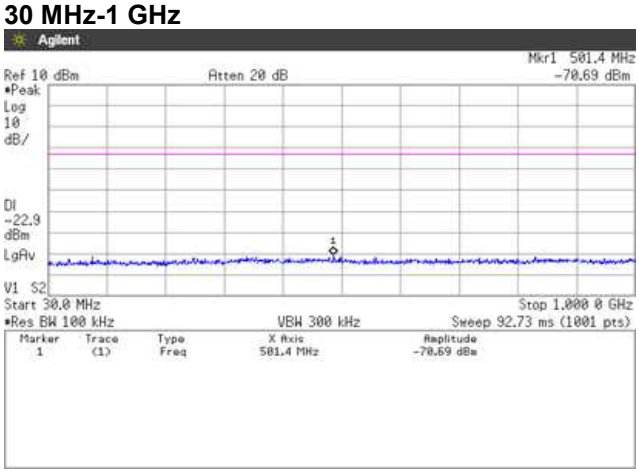


20 GHz-25 GHz

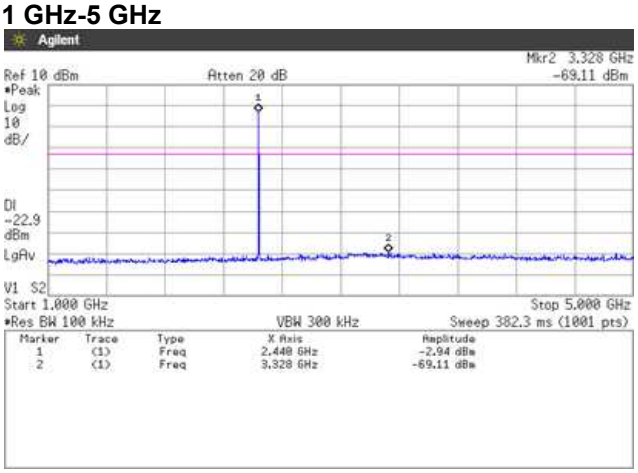


Channel Middle

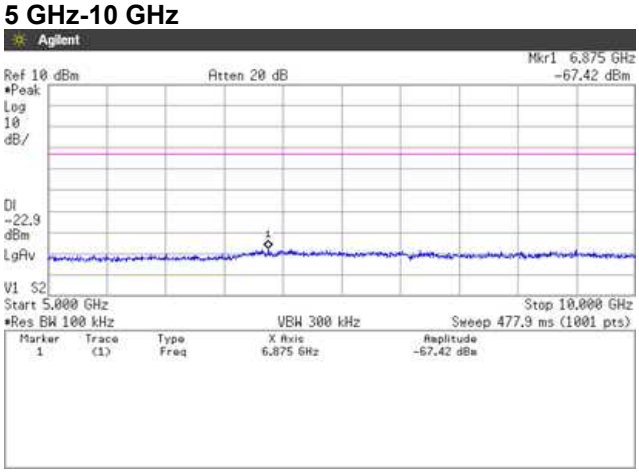
30 MHz-1 GHz



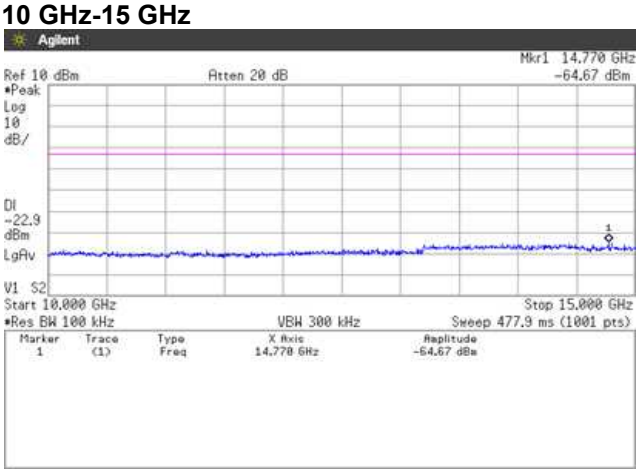
1 GHz-5 GHz



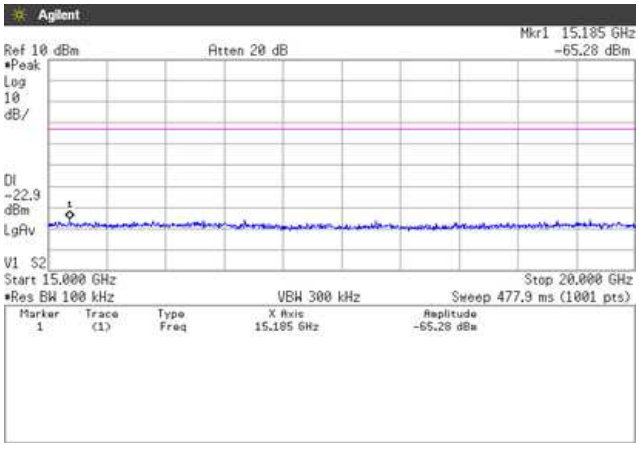
5 GHz-10 GHz



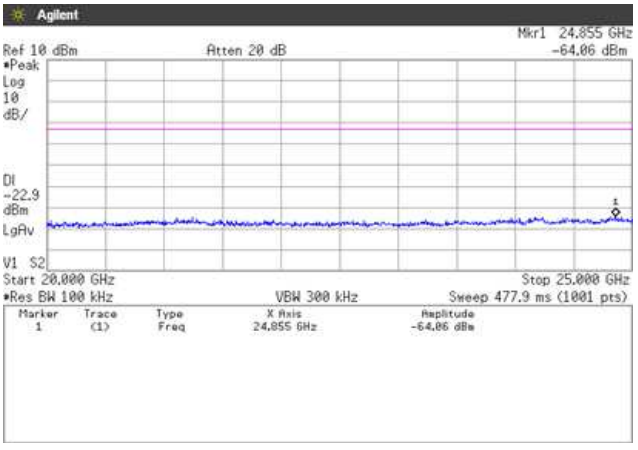
10 GHz-15 GHz



15 GHz-20 GHz

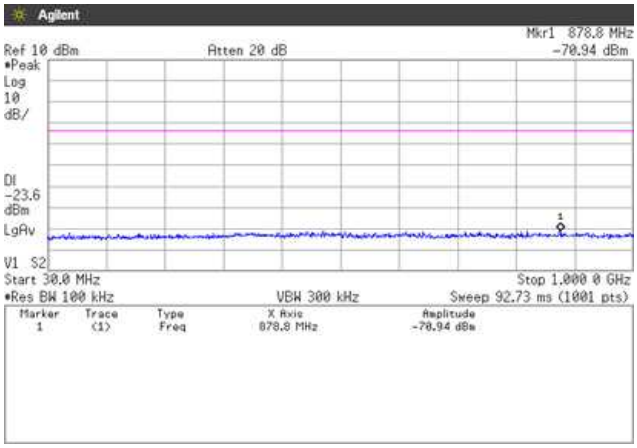


20 GHz-25 GHz

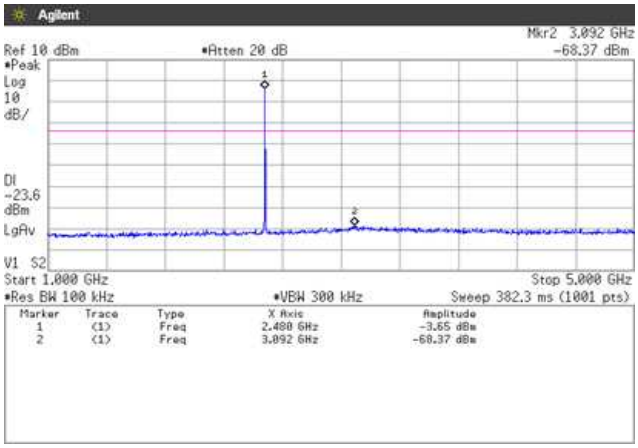


Channel High

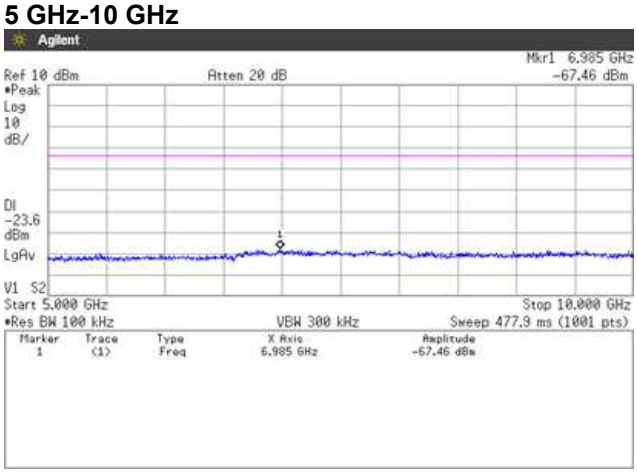
30 MHz-1 GHz



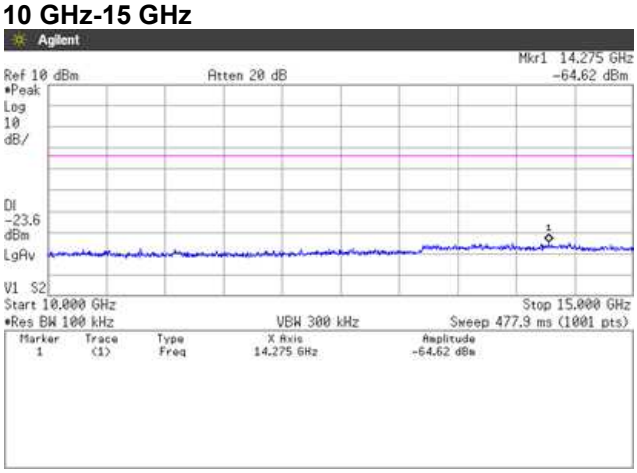
1 GHz-5 GHz



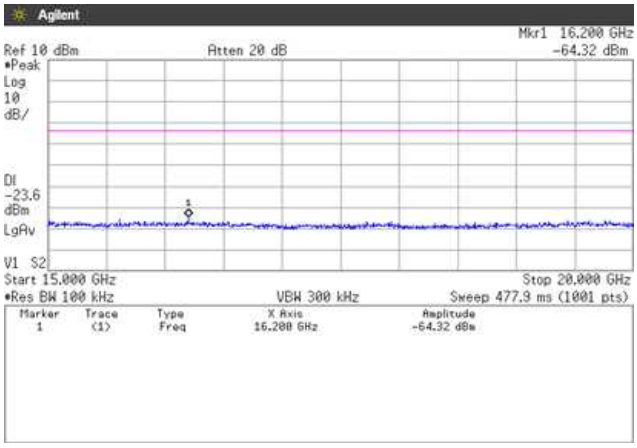
5 GHz-10 GHz



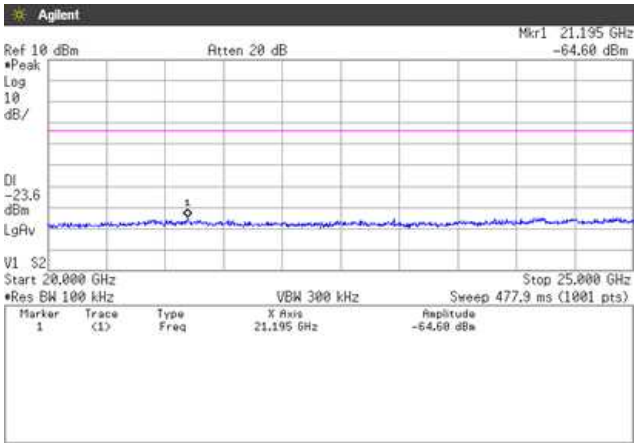
10 GHz-15 GHz



15 GHz-20 GHz

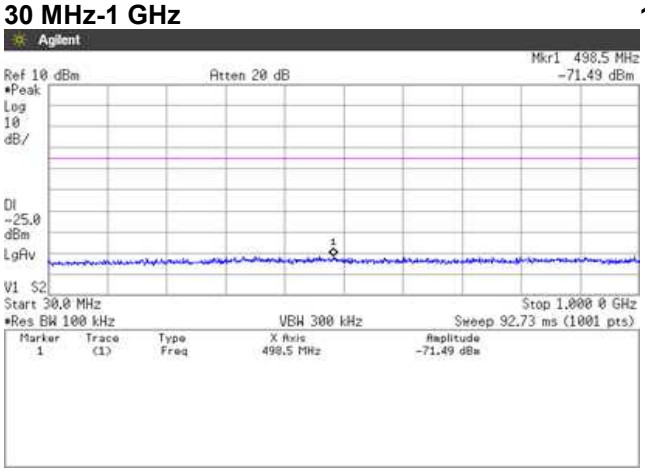


20 GHz-25 GHz

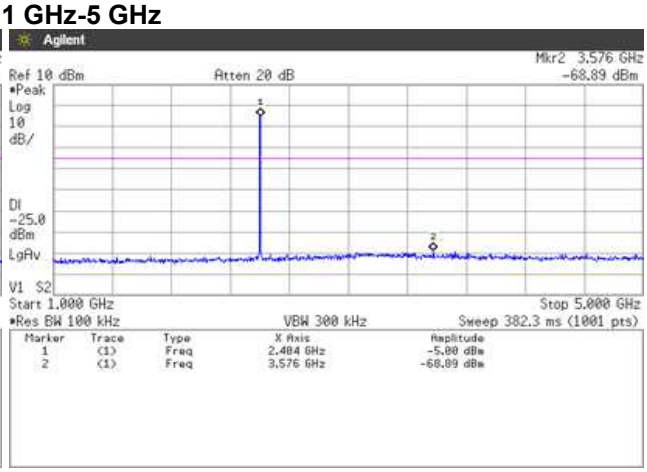


[3-DH5]
Channel Low

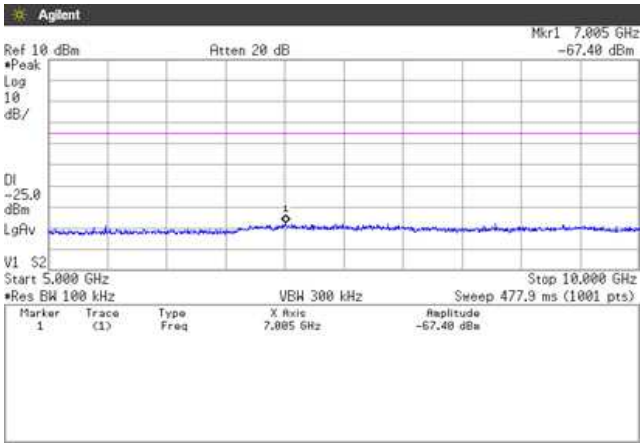
30 MHz-1 GHz



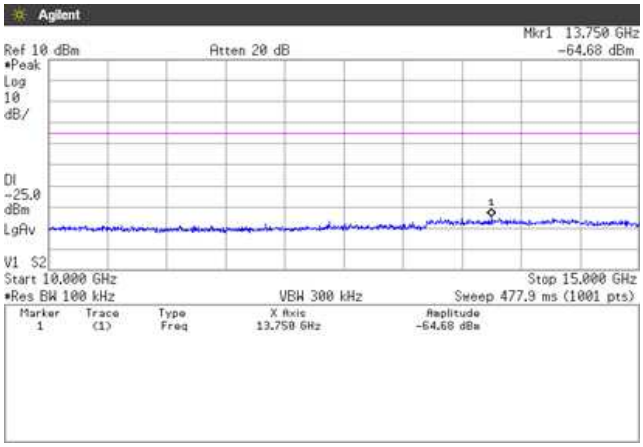
1 GHz-5 GHz



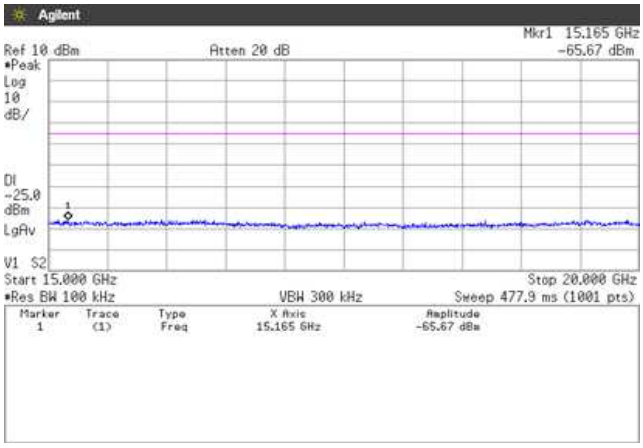
5 GHz-10 GHz



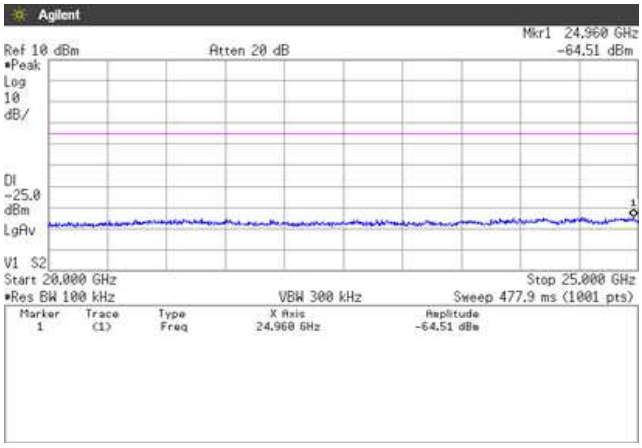
10 GHz-15 GHz



15 GHz-20 GHz

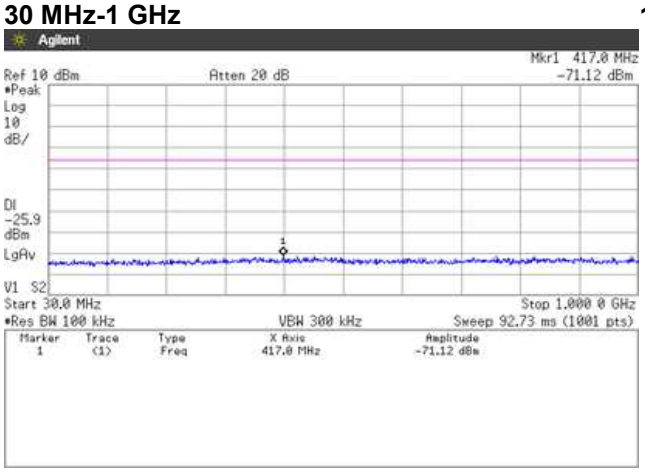


20 GHz-25 GHz

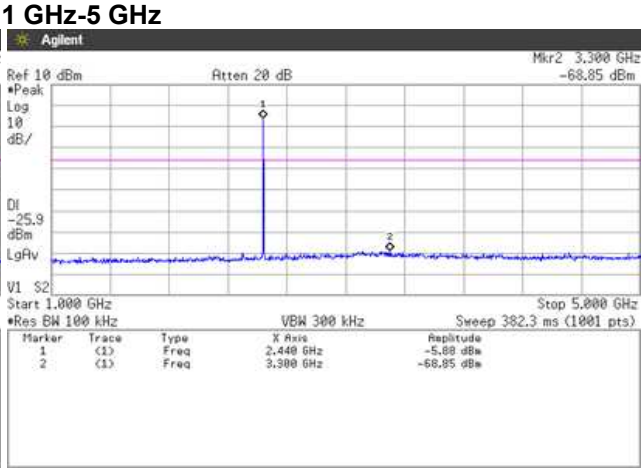


[3-DH5]
Channel Middle

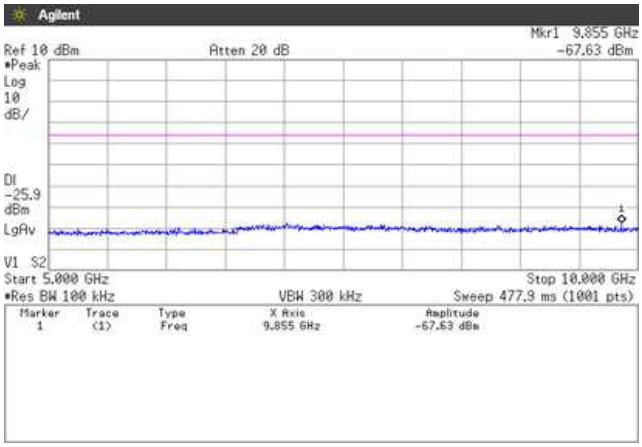
30 MHz-1 GHz



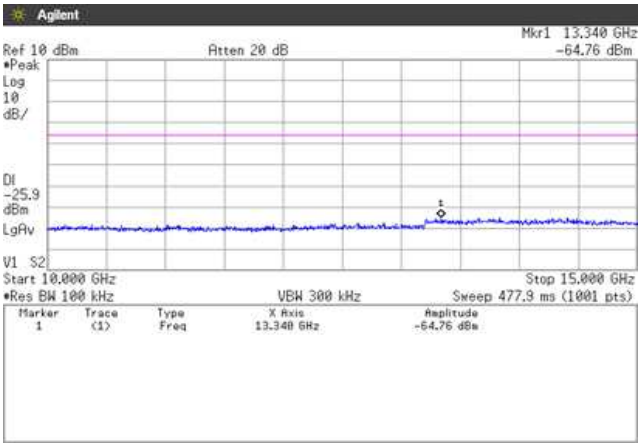
1 GHz-5 GHz



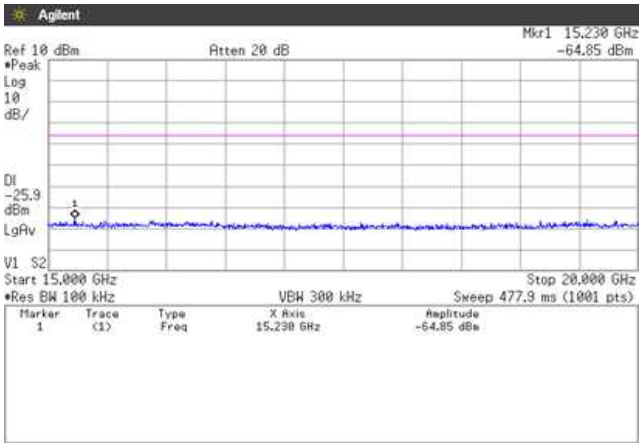
5 GHz-10 GHz



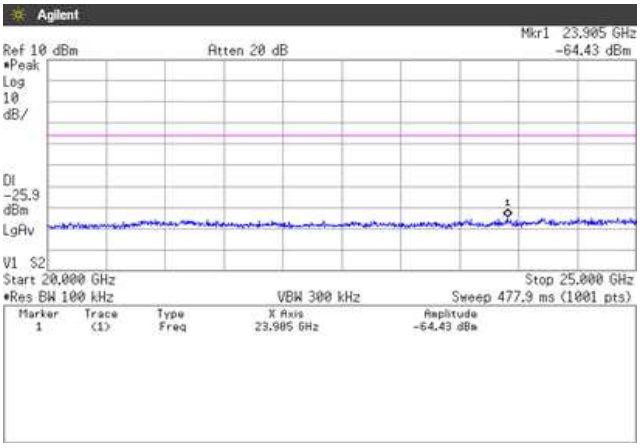
10 GHz-15 GHz



15 GHz-20 GHz

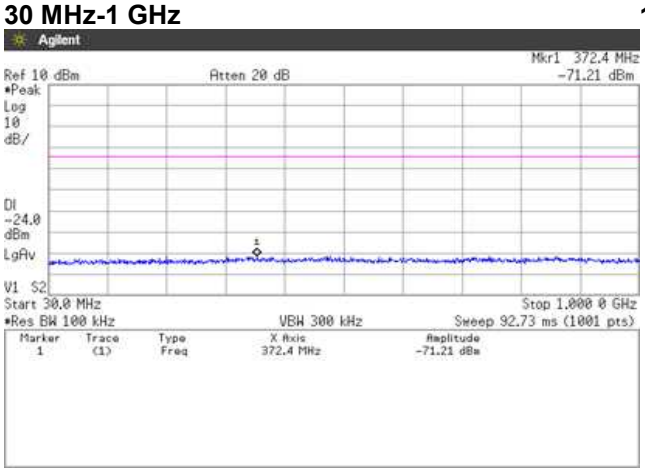


20 GHz-25 GHz

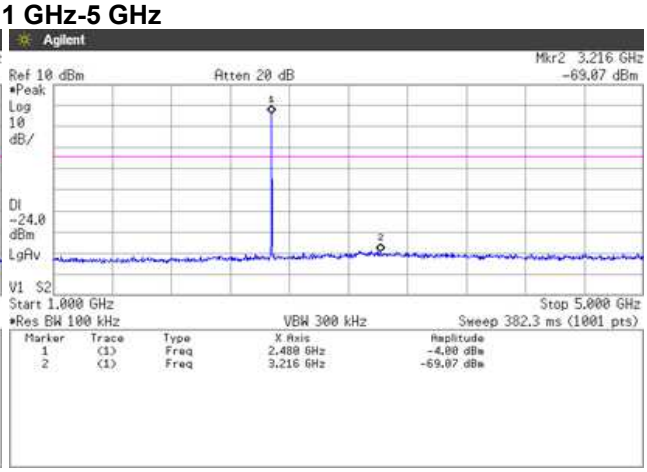


[3-DH5]
Channel High

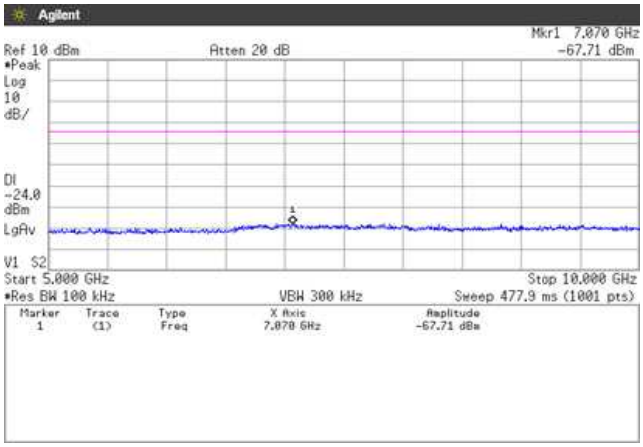
30 MHz-1 GHz



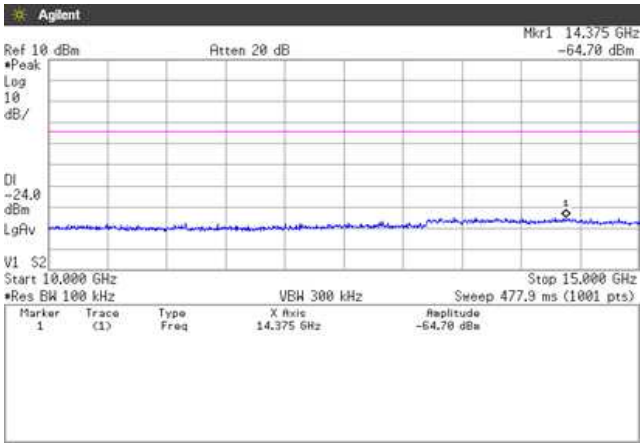
1 GHz-5 GHz



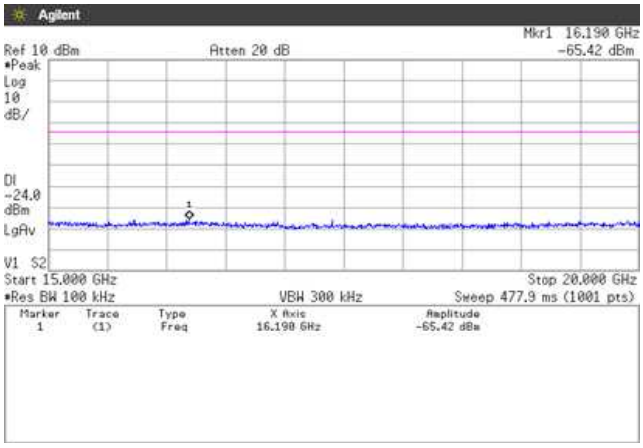
5 GHz-10 GHz



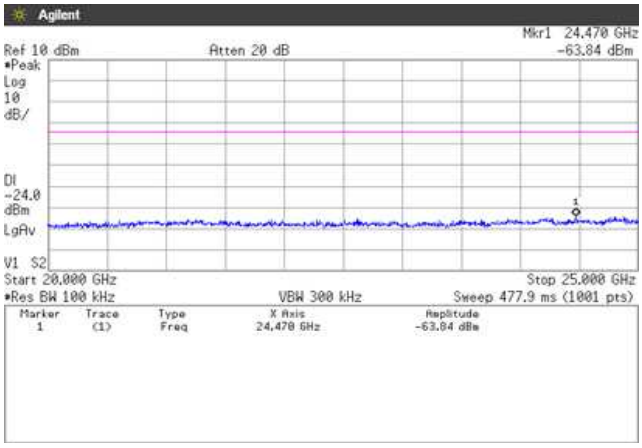
10 GHz-15 GHz



15 GHz-20 GHz



20 GHz-25 GHz



4.8 Spurious Emissions - Radiated -

4.8.1 Measurement procedure

[FCC 15.247(d), 15.205, 15.209]

Test was applied by following conditions.

Test method	:	ANSI C63.10
Frequency range	:	9kHz to 25GHz
Test place	:	3m Semi-anechoic chamber
EUT was placed on	:	Styrofoam table / (W)1.0m × (D)1.0m × (H)0.8m (below 1GHz) Styrofoam table / (W)0.6m × (D)0.6m ×(H)1.5m (above 1GHz)
Antenna distance	:	3m
Test receiver setting		Below 1GHz
- Detector	:	Average (9kHz-90kHz, 110kHz-490kHz), Quasi-peak
- Bandwidth	:	200Hz, 120kHz
Spectrum analyzer setting		Above 1GHz
- Peak	:	RBW=1MHz, VBW=3MHz, Span=0Hz, Sweep=auto
- Average	:	RBW=1MHz, VBW=3kHz, Span=0Hz, Sweep=auto Display mode=Linear

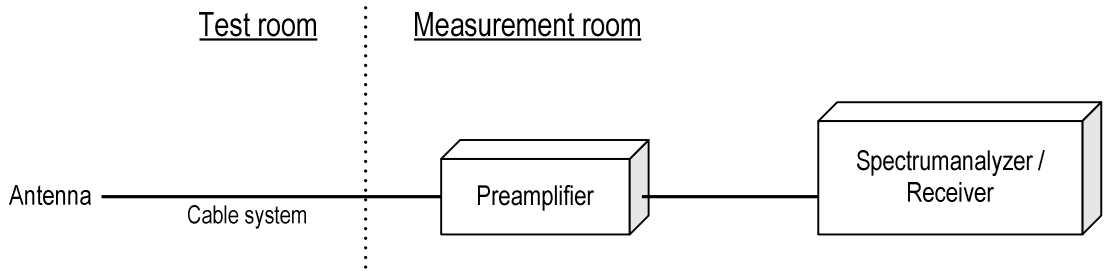
Average Measurement Setting [VBW]

Mode	Duty Cycle (%)	T_{on} (us)	T_{off} (us)	$1/T_{on}$ (kHz)	Determined VBW Setting
Bluetooth 4.1 EDR	76.93	2885	865	0.347	1kHz

Although these tests were performed other than open area test site,
adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606.

Radiated emission measurements are performed at 3m distance with the broadband antenna (Loop antenna, Biconical antenna, Log periodic antenna, Double ridged guide antenna and Broad-band horn Antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission. As for the Loop antenna, it is positioned with its plane vertical, and the center of the Loop antenna is 1m above the ground plane.
The EUT is Placed on a turntable, which is 0.8m/1.5m above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed in order for them to warm up to their normal operating condition.

- Test configuration



Japan

4.8.2 Calculation method

[9kHz to 150kHz]
Emission level = Reading + (Ant factor + Cable system loss)
Margin = Limit – Emission level

[150kHz to 25GHz]
Emission level = Reading + (Ant factor + Cable system loss - Amp. Gain)
Margin = Limit – Emission level

Example:
Limit @ 4804.0MHz : 74.0dBuV/m (Peak Limit)
S.A Reading = 49.0dBuV Cable system loss = 8.3dB
Result = 49.0 + 8.3 = 57.3dBuV/m
Margin = 74.0 - 57.3 = 16.7dB

4.8.3 Limit

Frequency [MHz]	Field strength		Distance [m]
	[uV/m]	[dBuV/m]	
0.009-0.490	2400 / F [kHz]	20logE [uV/m]	300
0.490-1.705	24000 / F [kHz]	20logE [uV/m]	30
1.705-30	30	29.5	30
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Note:
1. The lower limit shall apply at the transition frequencies.
2. Emission level [dBuV/m] = 20log Emission [uV/m]
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition modulation.

Japan

4.8.4 Test data

Date	:	23-January-2019			
Temperature	:	20.5 [˚C]			
Humidity	:	26.3 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Taiki Watanabe

Date	:	25-January-2019			
Temperature	:	20.9 [˚C]			
Humidity	:	27.9 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Taiki Watanabe

Date	:	01-February-2019			
Temperature	:	18.5 [˚C]			
Humidity	:	28.3 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Chiaki Kanno

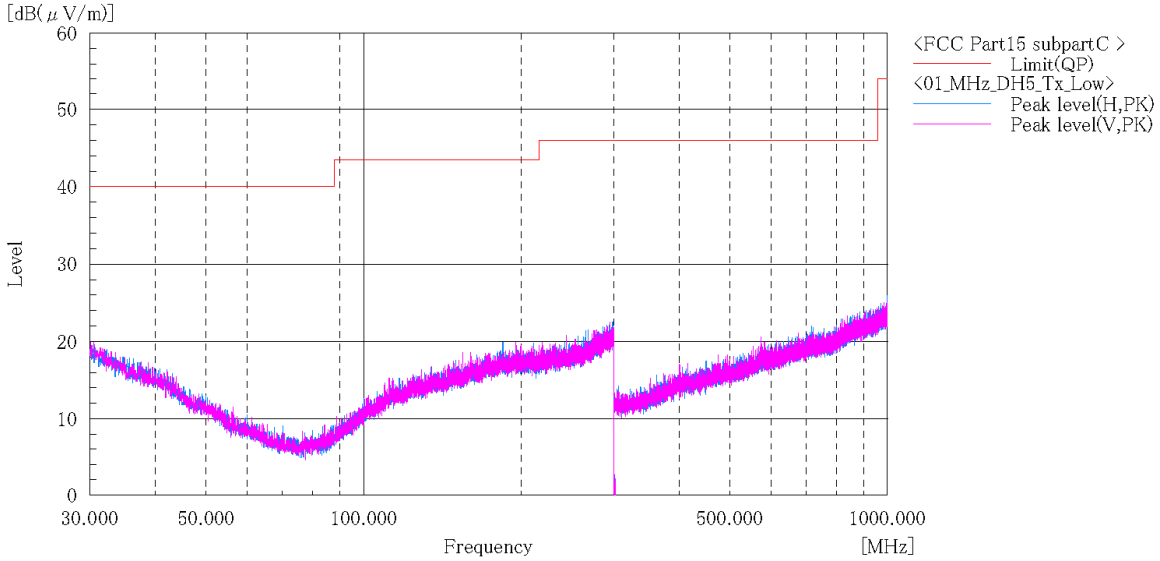
Date	:	02-February-2019			
Temperature	:	18.3 [˚C]			
Humidity	:	27.1 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Chiaki Kanno

[Transmission mode - With camera]
[DH5]
Channel: Low
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.01>> 1 February,2019 01:00

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.5[℃] 28.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch: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 9kHz to 30MHz at the 3 meters distance.

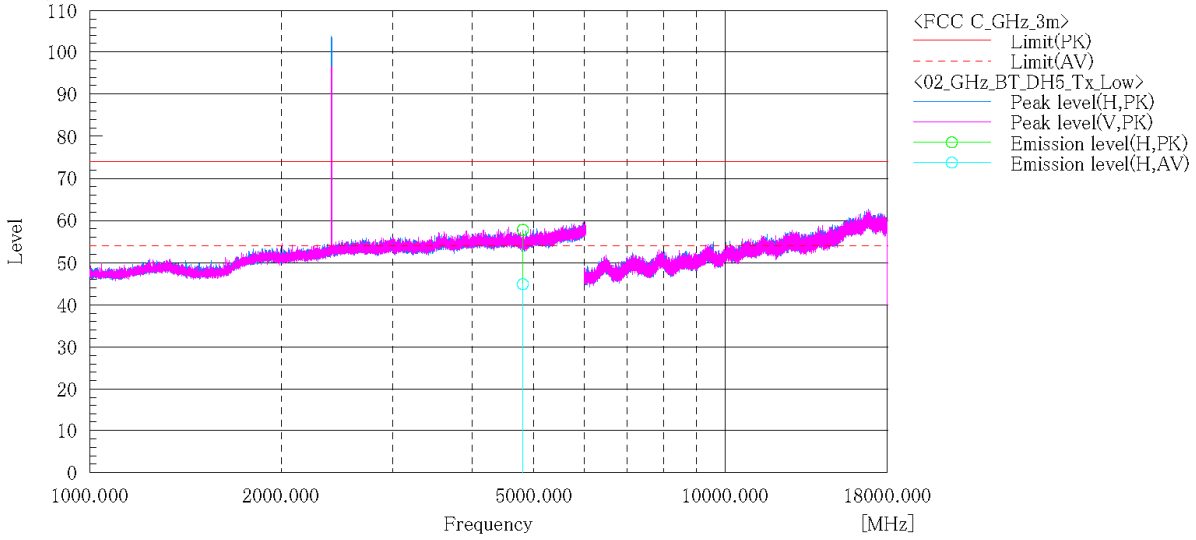
Japan

[DH5]
Channel: Low
ABOVE 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.02>> 25 January,2019 14:25

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart C
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: JA53	Temp,Hum,Atm	: 20.9[℃] 27.9[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch:Low	Note2	:



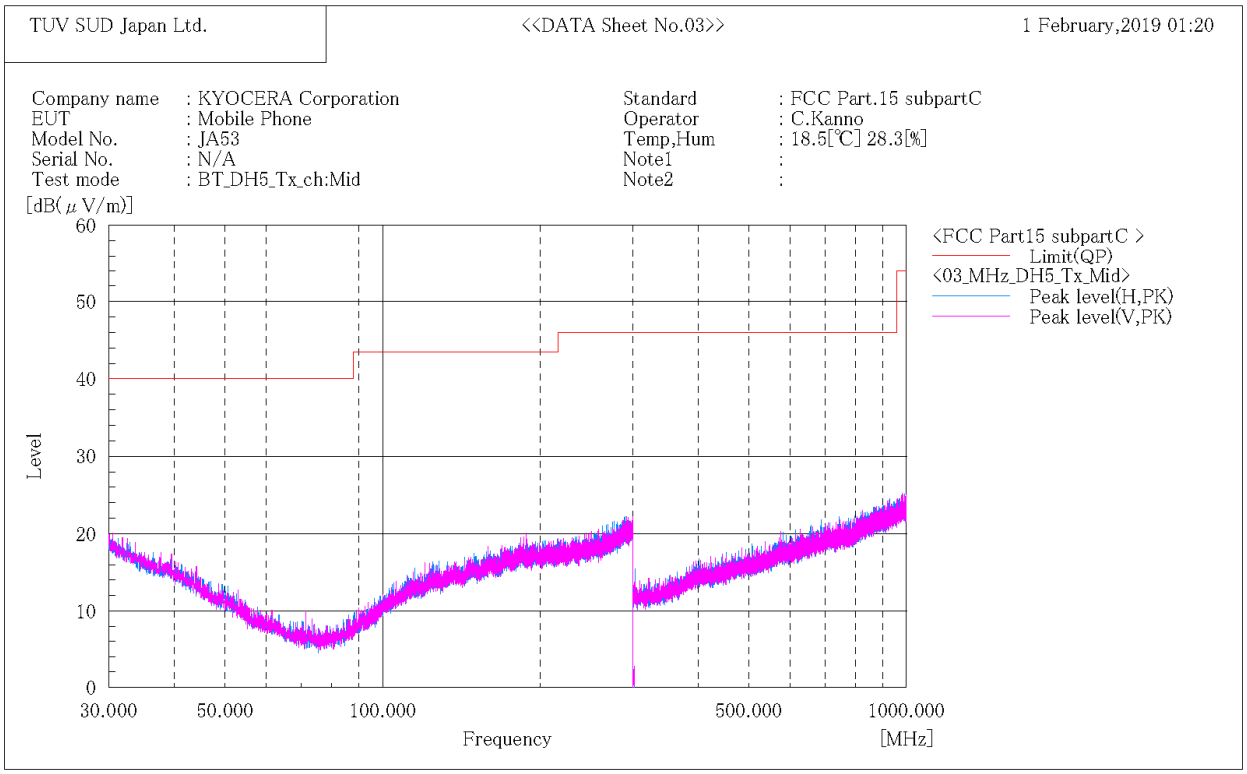
Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4804.000	H	48.9	36.0	8.9	57.8	44.9	74.0	54.0	16.2	9.1	112.0	289.0	

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[DH5]
Channel: Middle
BELOW 1 GHz

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



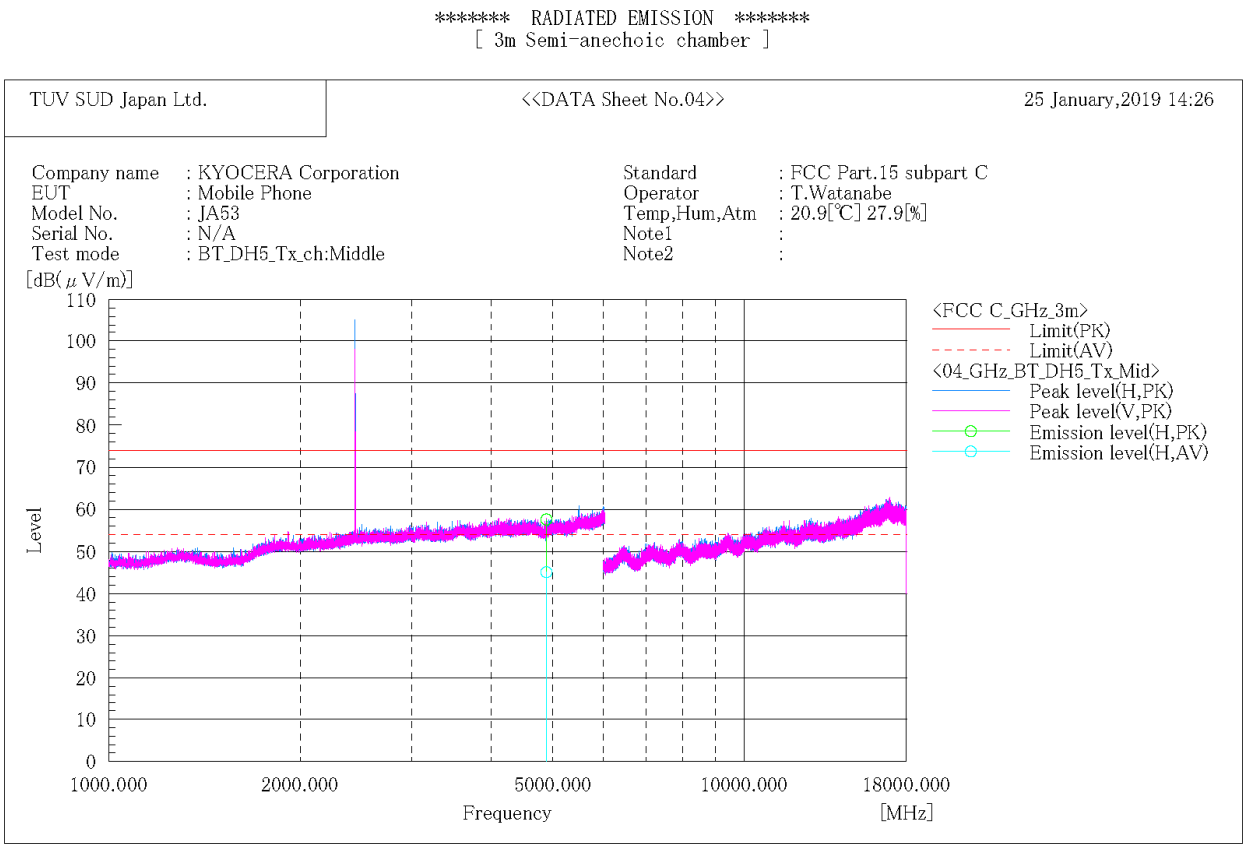
Final Result

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 9kHz to 30MHz at the 3 meters distance.

Japan

[DH5]
Channel: Middle
ABOVE 1 GHz



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading AV [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Result AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [°]	Remark
1	4882.000	H	48.4	35.9	9.2	57.6	45.1	74.0	54.0	16.4	8.9	137.0	223.0	

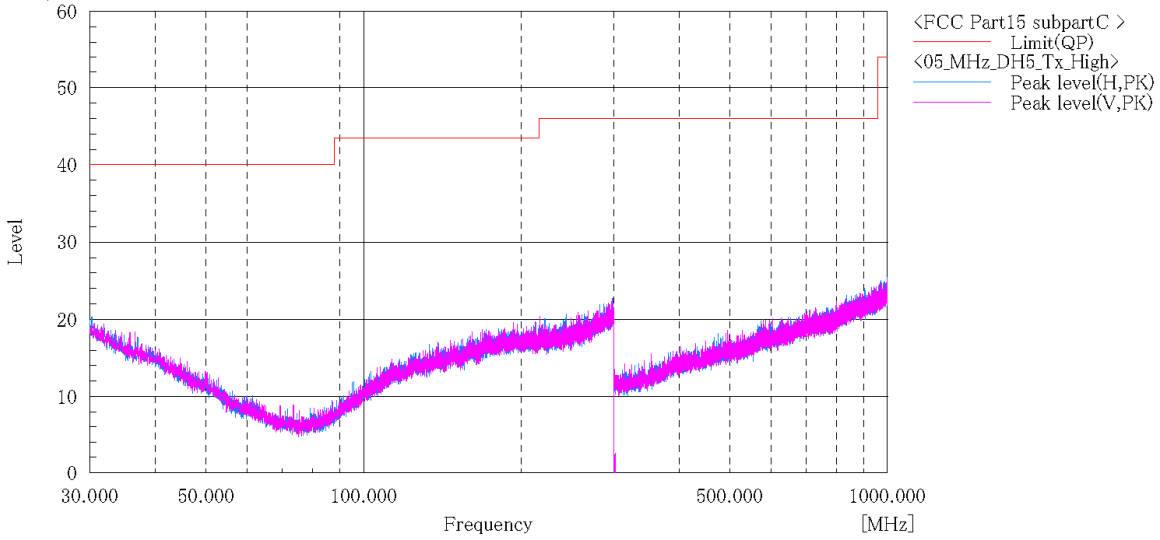
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[DH5]
Channel: High
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.05>> 1 February,2019 01:40

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.5[℃] 28.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch:High	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 9kHz to 30MHz at the 3 meters distance.

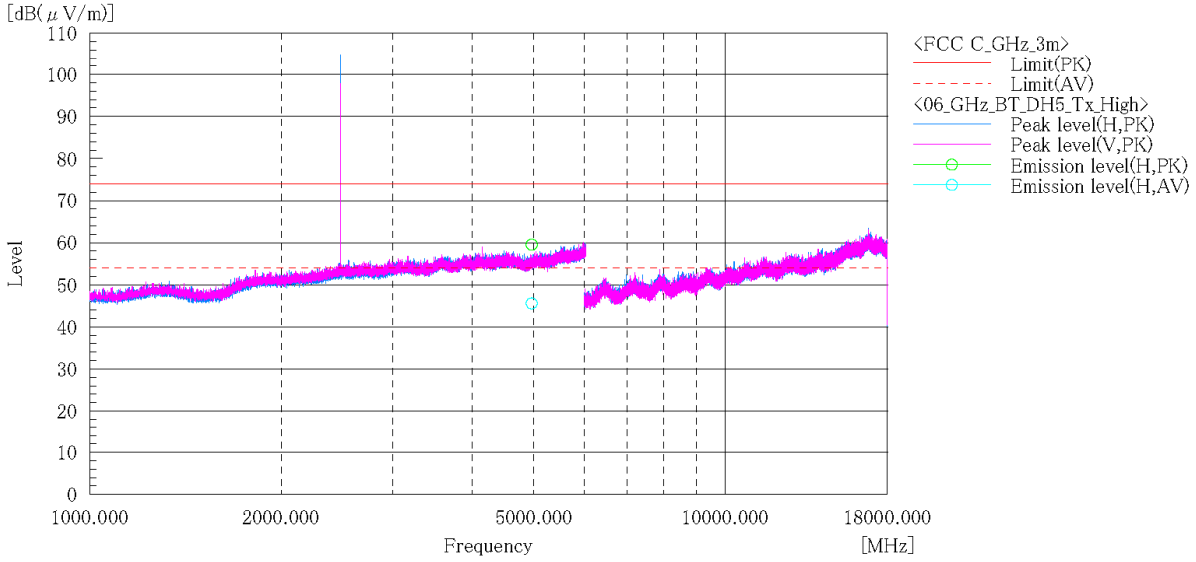
Japan

[DH5]
Channel: High
ABOVE 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.06>> 25 January,2019 15:48

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart C
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: JA53	Temp,Hum,Atm	: 20.9[℃] 27.9[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch:High	Note2	:



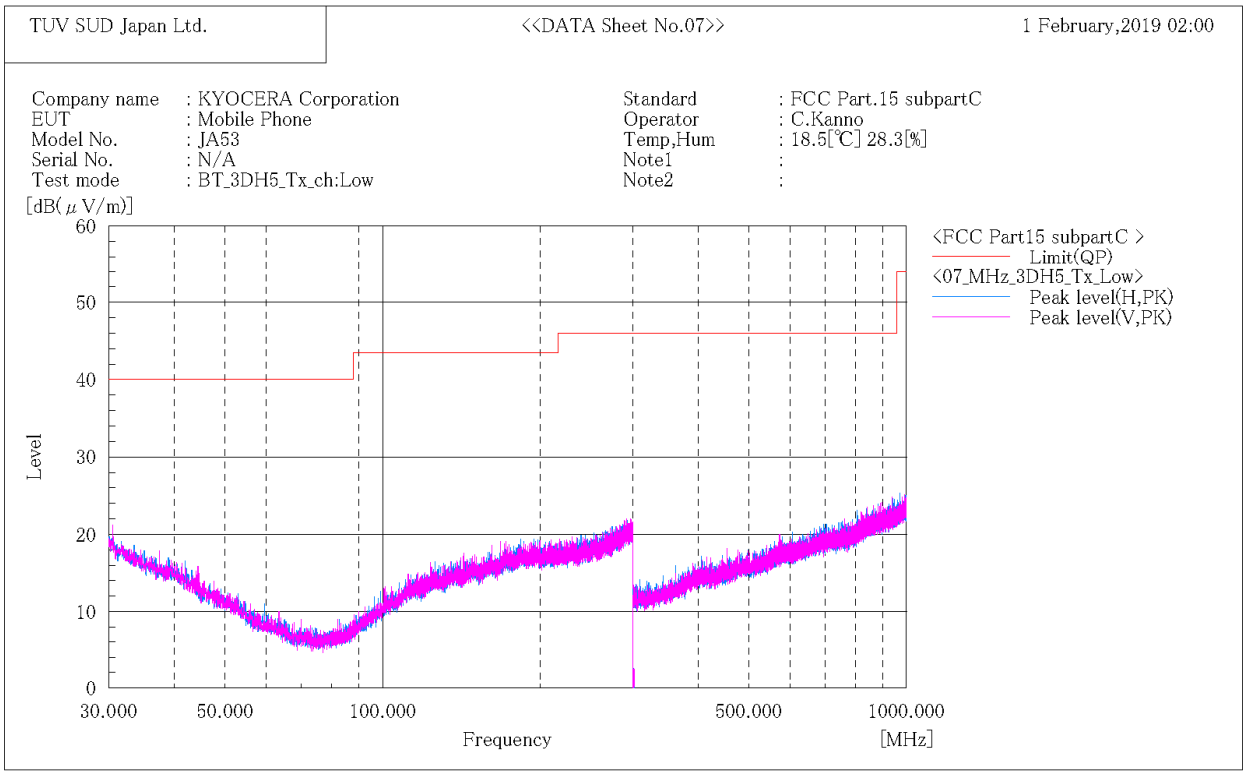
Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4960.000	H	49.7	35.8	9.8	59.5	45.6	74.0	54.0	14.5	8.4	185.0	150.0	

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[3-DH5]
Channel: Low
BELOW 1 GHz

******* 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 9kHz to 30MHz at the 3 meters distance.

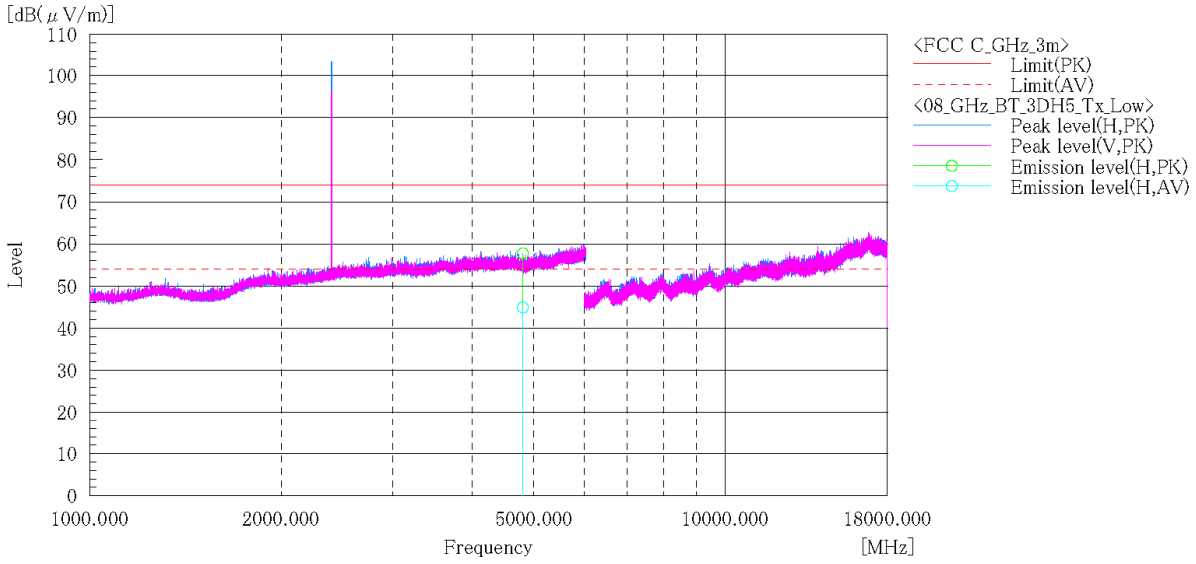
Japan

[3-DH5]
Channel: Low
ABOVE 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.08>> 25 January,2019 16:32

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart C
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: JA53	Temp,Hum,Atm	: 20.5[℃] 26.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_3DH5_Tx_ch:Low	Note2	:



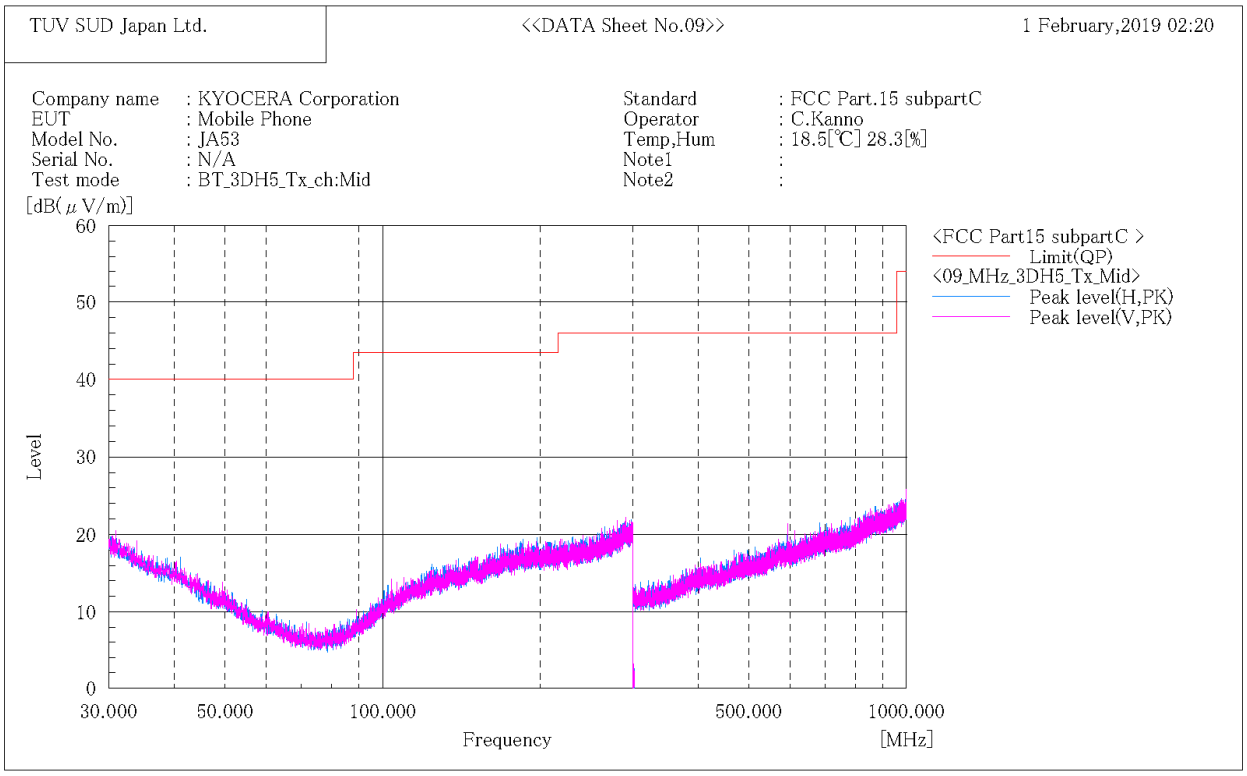
Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4804.000	H	48.8	36.0	8.9	57.7	44.9	74.0	54.0	16.3	9.1	162.0	24.0	

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[3-DH5]
Channel: Middle
BELOW 1 GHz

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



Final Result

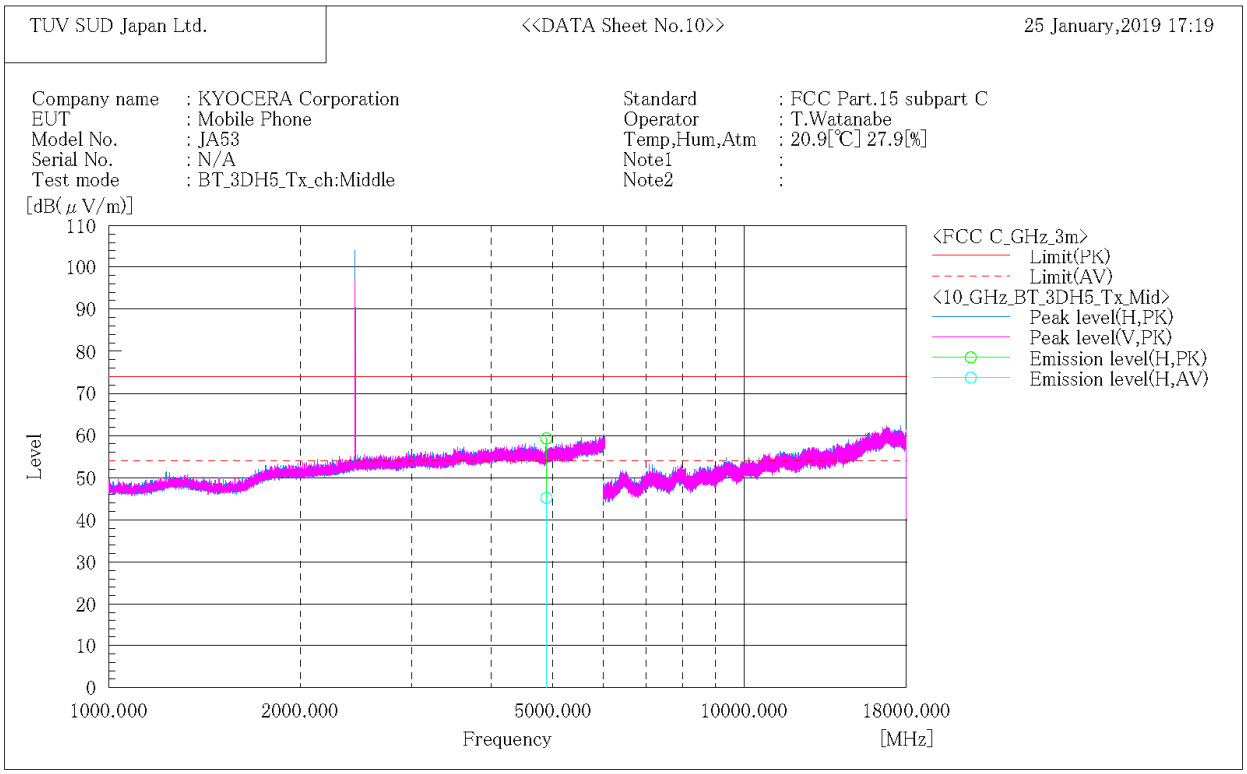
No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]	Remark

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 30MHz at the 3 meters distance.

Japan

[3-DH5]
Channel: Middle
ABOVE 1 GHz

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



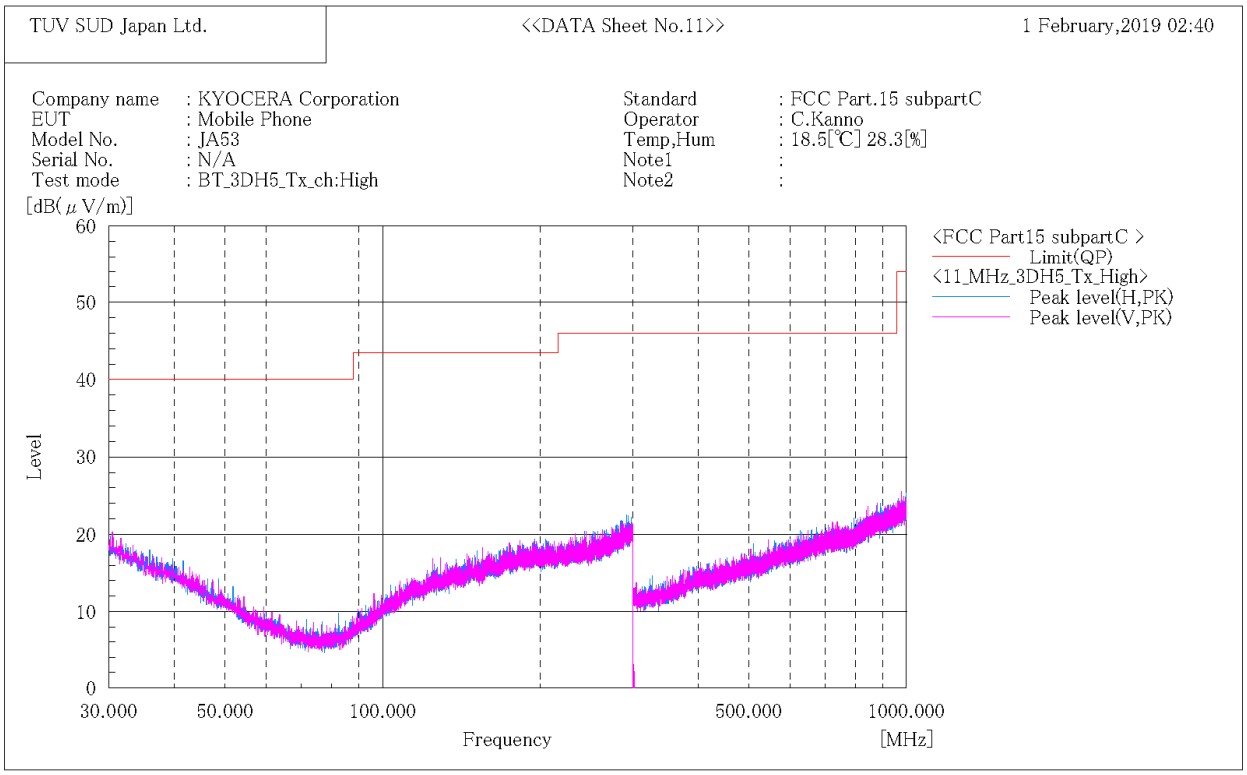
Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4882.000	H	50.1	36.0	9.2	59.3	45.2	74.0	54.0	14.7	8.8	142.0	153.0	

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[3-DH5]
Channel: High
BELOW 1 GHz

******* 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 9kHz to 30MHz at the 3 meters distance.

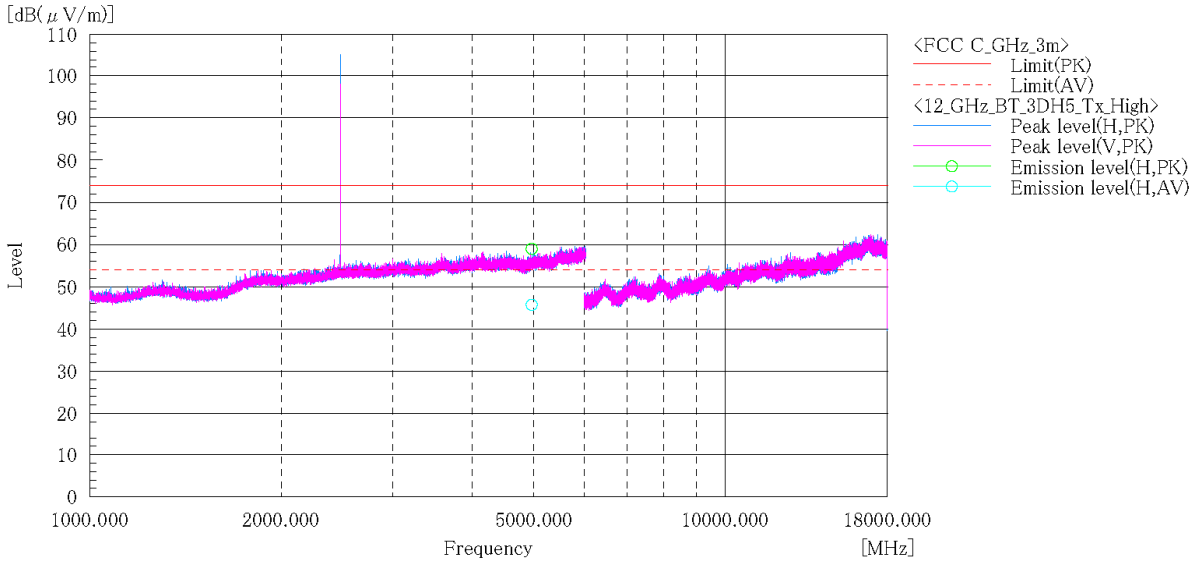
Japan

[3-DH5]
Channel: High
ABOVE 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.12>> 25 January,2019 13:04

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart C
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: JA53	Temp,Hum,Atm	: 20.9[℃] 27.9[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_3DH5_Tx_ch:High	Note2	:



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading AV [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Result AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [°]	Remark
1	4960.000	H	49.2	35.9	9.8	59.0	45.7	74.0	54.0	15.0	8.3	161.0	99.0	

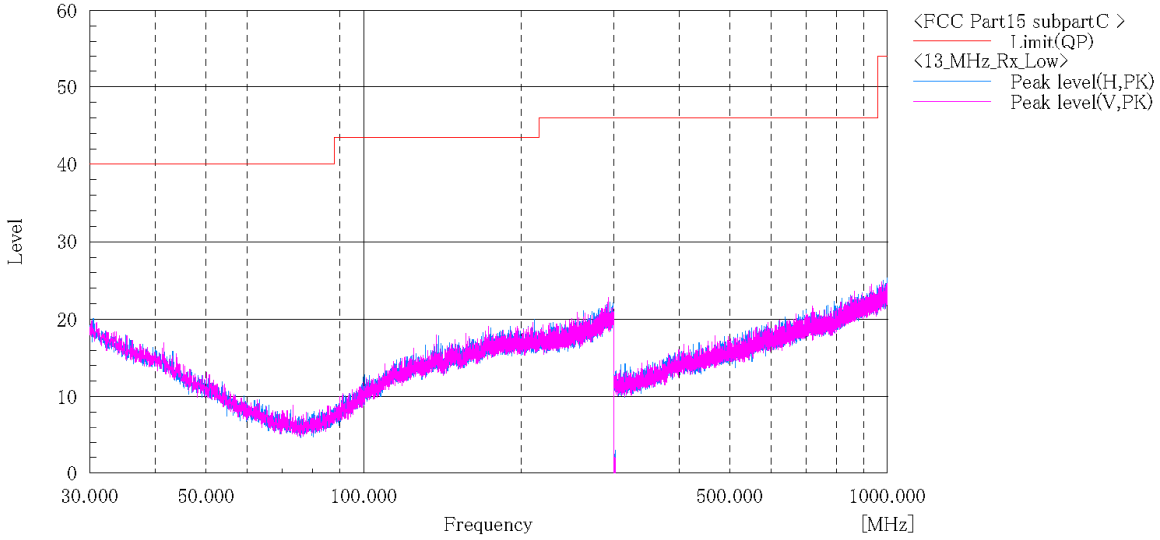
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[Receive mode - With camera]
Channel: Low
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.13>> 1 February,2019 03:00

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.5[℃] 28.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_Rx_ch:Low	Note2	:



Final Result

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

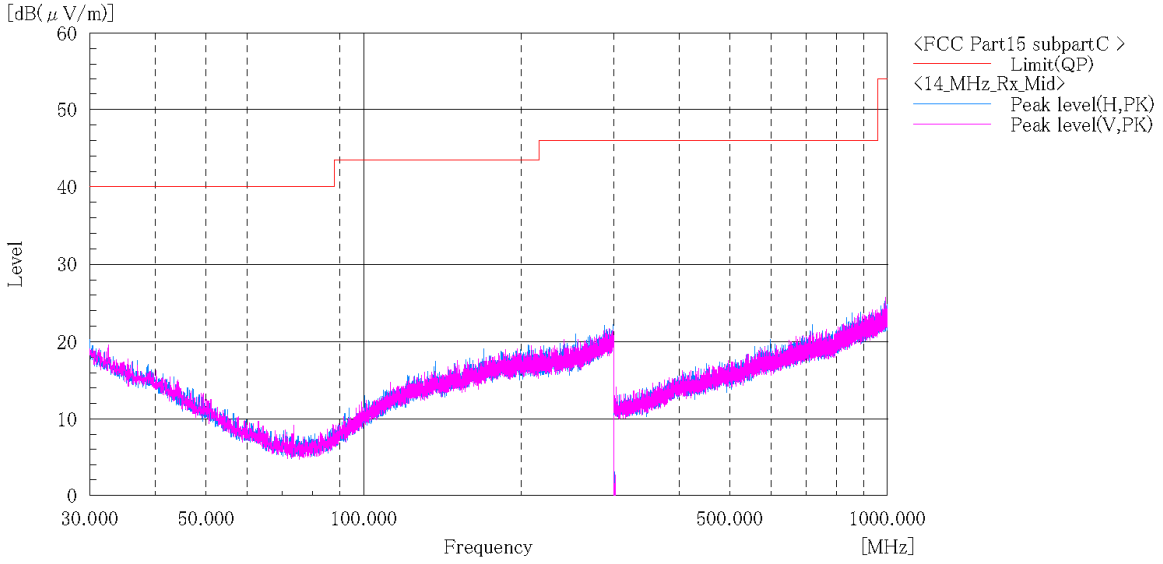
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 30MHz and 1GHz to 25GHz at the 3 meters distance.

Channel: Middle
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.14>> 1 February,2019 03:20

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.5[℃] 28.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_Rx_ch:Mid	Note2	:



Final Result

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

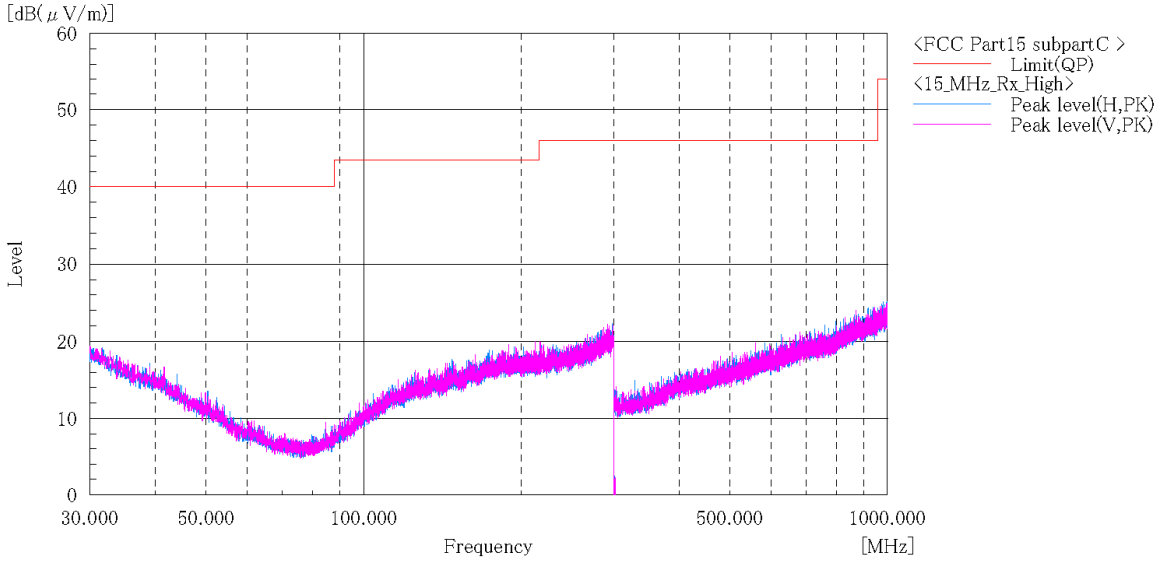
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 30MHz and 1GHz to 25GHz at the 3 meters distance.

Channel: High
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.15>> 1 February,2019 03:40

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.5[℃] 28.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_Rx_ch:High	Note2	:



Final Result

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

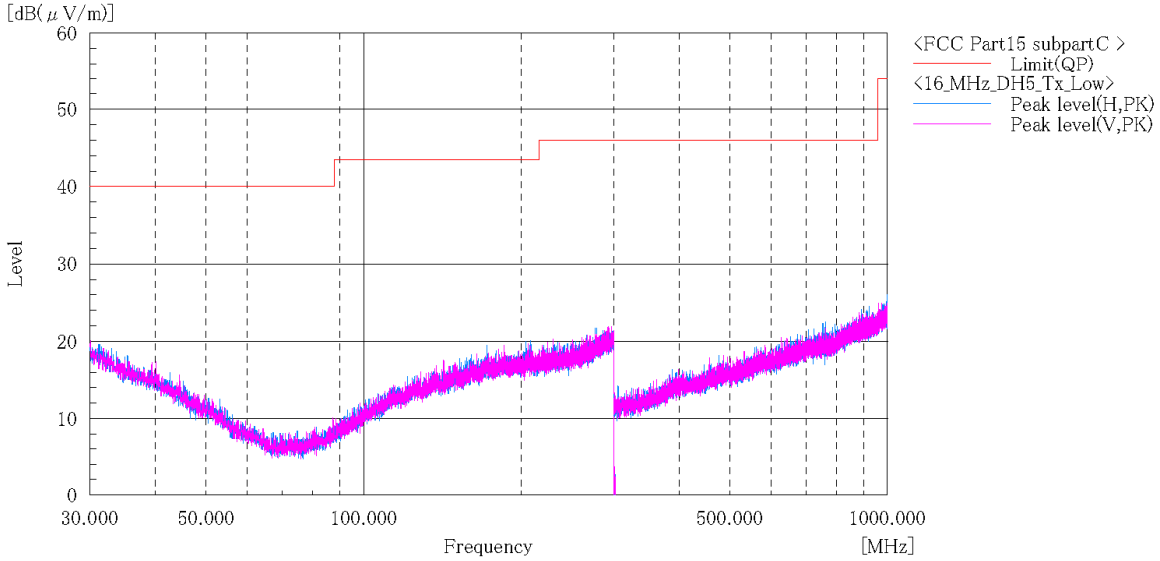
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 30MHz and 1GHz to 25GHz at the 3 meters distance.

[Transmit mode - Without camera]
[DH5]
Channel: Low
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.16>> 2 February,2019 05:40

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch: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 9kHz to 30MHz at the 3 meters distance.

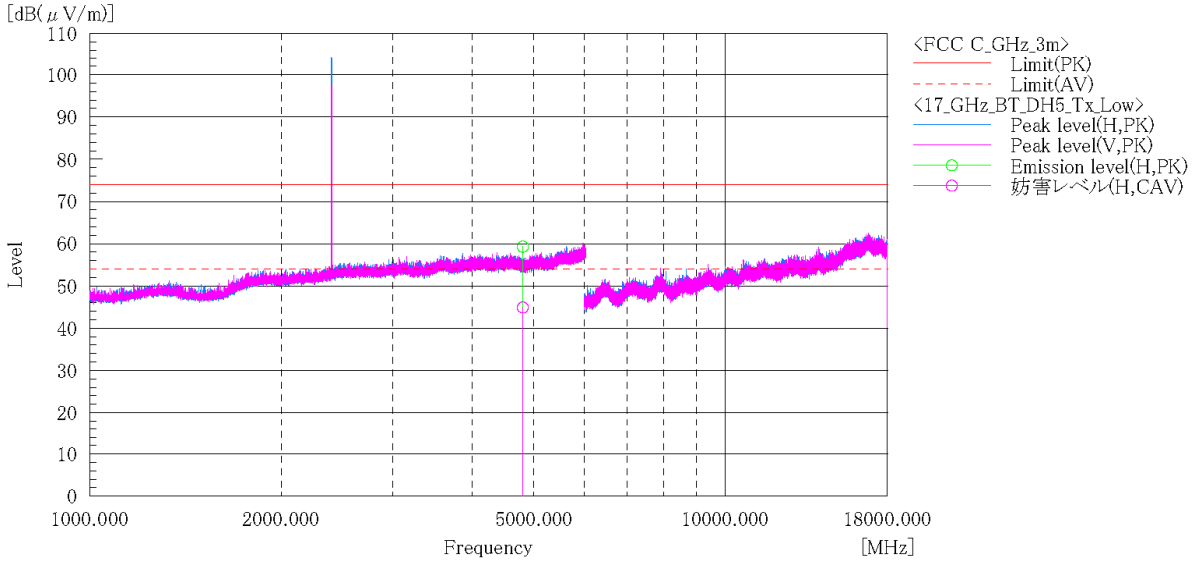
Japan

[DH5]
Channel: Low
ABOVE 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.17>> 23 January,2019 11:55

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart C
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: JA53	Temp,Hum,Atm	: 20.5[℃] 26.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch:Low	Note2	:



Final Result

No.	Frequency	(P)	Reading PK	Reading CAV	c.f	Result PK	Result CAV	Limit PK	Limit AV	Margin PK	Margin CAV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4804.000	H	50.4	36.0	8.9	59.3	44.9	74.0	54.0	14.7	9.1	145.0	183.0	

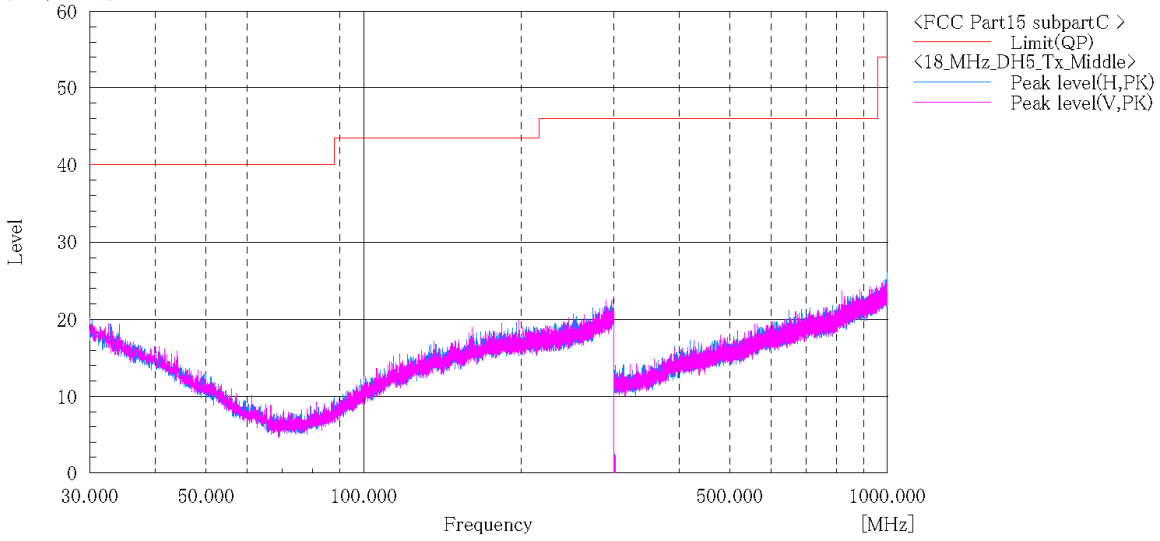
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[DH5]
Channel: Middle
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.18>> 2 February,2019 06:00

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch:Mid	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 9kHz to 30MHz at the 3 meters distance.

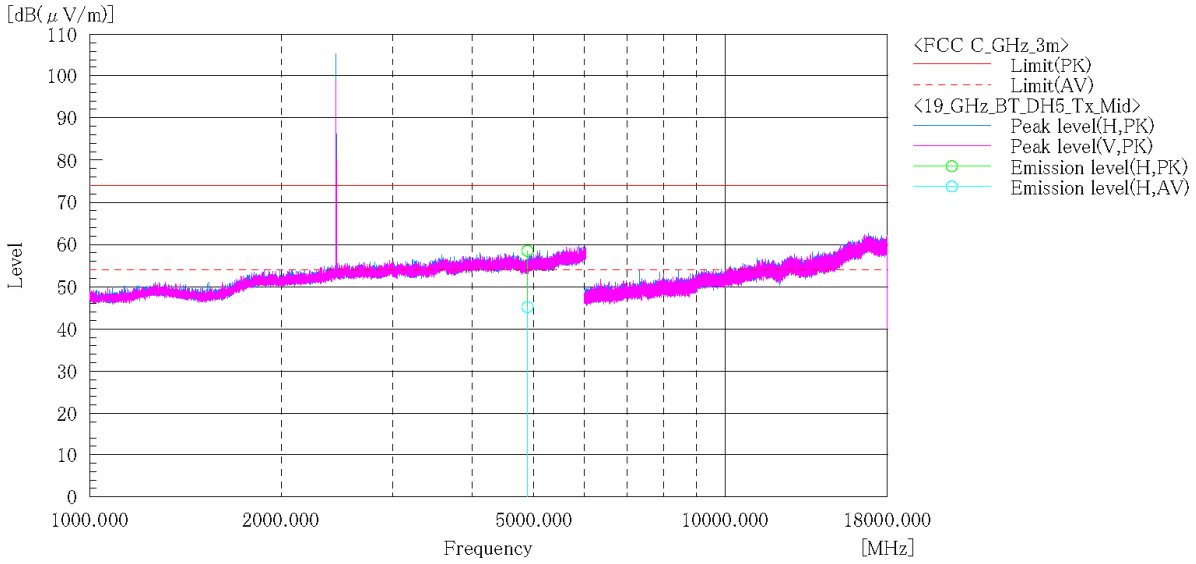
Japan

[DH5]
Channel: Middle
ABOVE 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.19>> 23 January,2019 13:53

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart C
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: JA53	Temp,Hum,Atm	: 20.5[℃] 26.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch:Middle	Note2	:



Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4882.000	H	49.3	36.0	9.2	58.5	45.2	74.0	54.0	15.5	8.8	150.0	110.0	

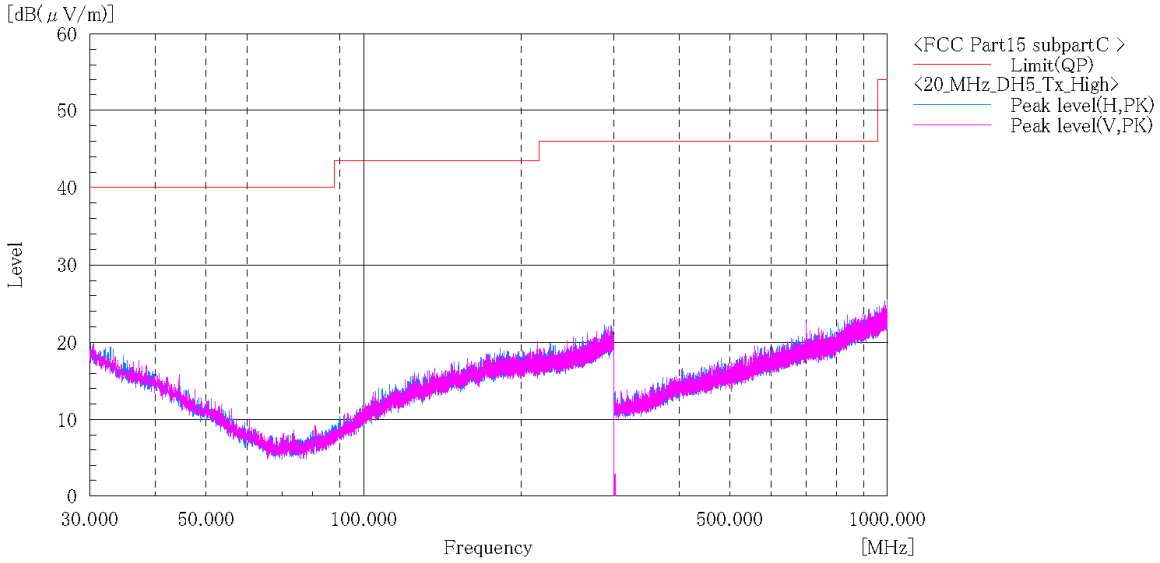
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[DH5]
Channel: High
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.20>> 2 February,2019 06:20

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_DH5_Tx_ch:High	Note2	:



Final Result

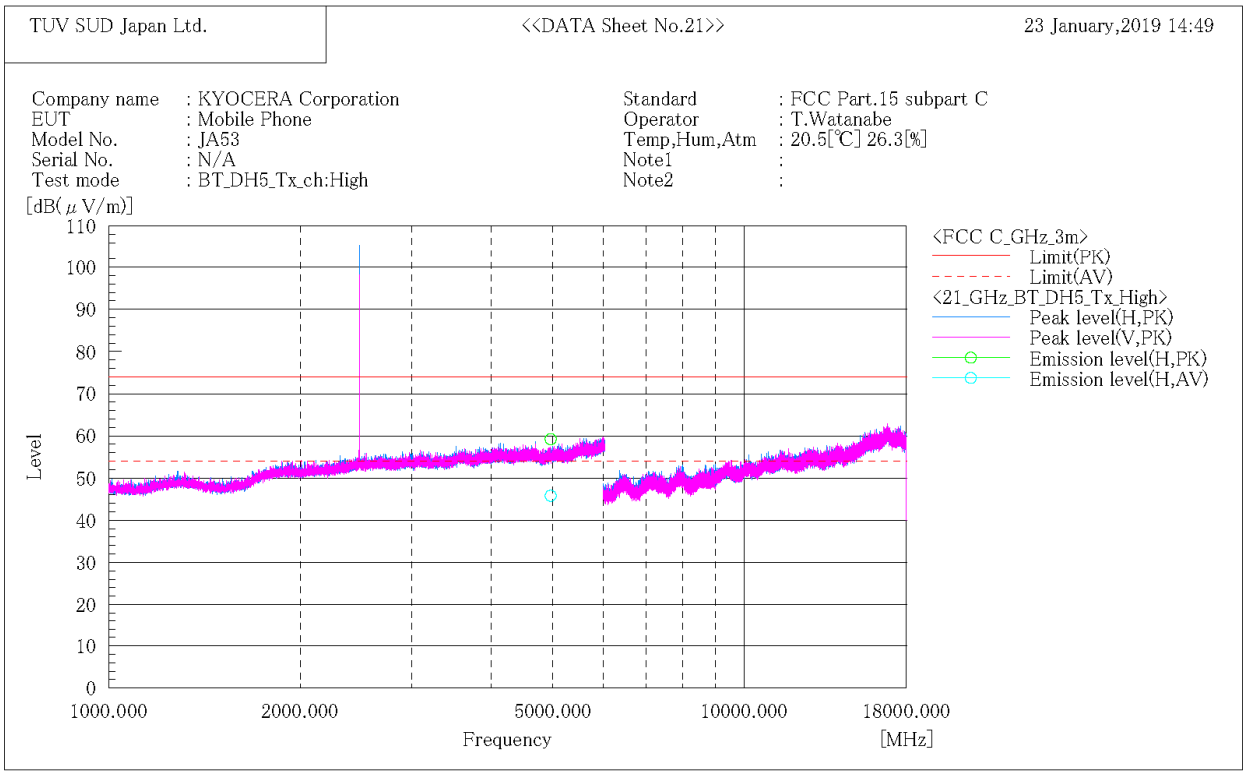
No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]	Remark

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 30MHz at the 3 meters distance.

Japan

[DH5]
Channel: High
ABOVE 1 GHz

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



Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4960.000	H	49.4	36.0	9.8	59.2	45.8	74.0	54.0	14.8	8.2	142.0	163.0	

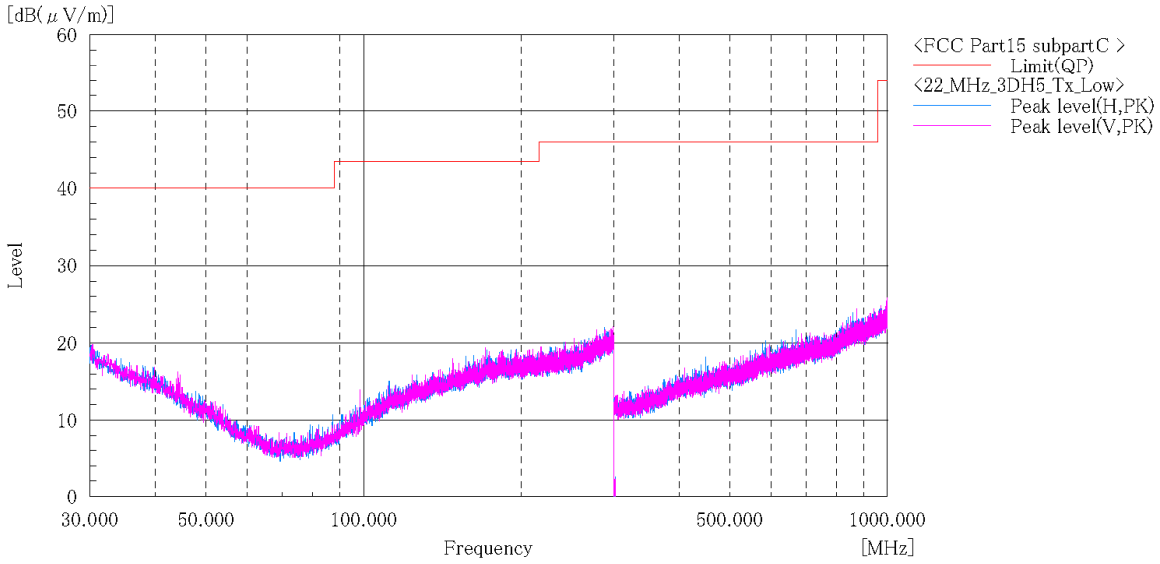
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[3-DH5]
Channel: Low
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.22>> 2 February,2019 06:40

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_3DH5_Tx_ch: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 9kHz to 30MHz at the 3 meters distance.

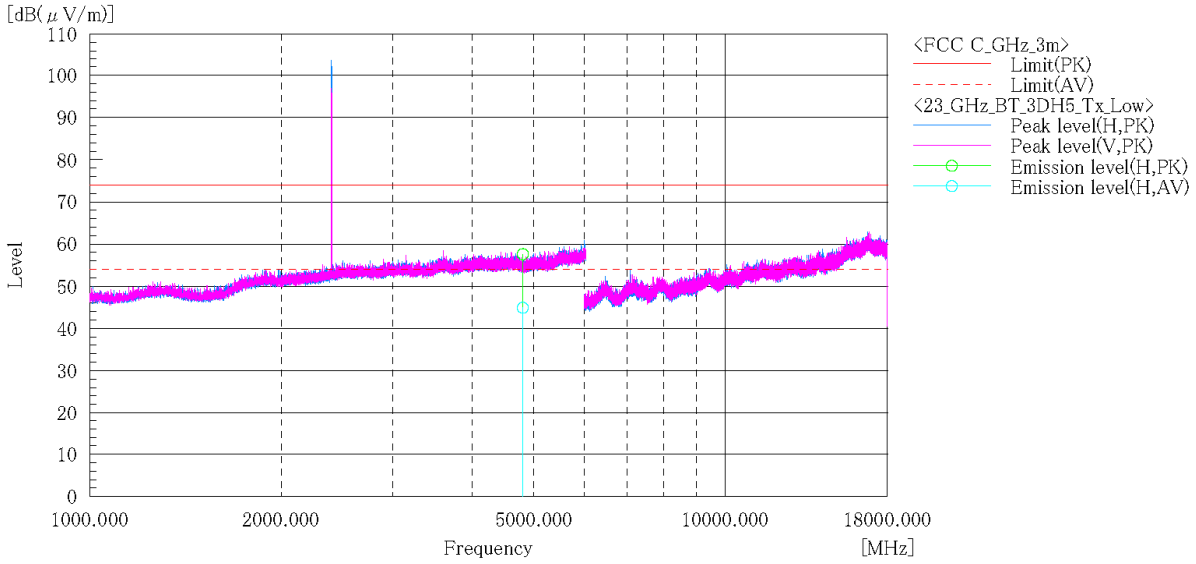
Japan

[3-DH5]
Channel: Low
ABOVE 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.23>> 23 January,2019 16:06

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart C
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: JA53	Temp,Hum,Atm	: 20.5[℃] 26.3[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_3DH5_Tx_ch:Low	Note2	:



Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4804.000	H	48.7	36.0	8.9	57.6	44.9	74.0	54.0	16.4	9.1	139.0	141.0	

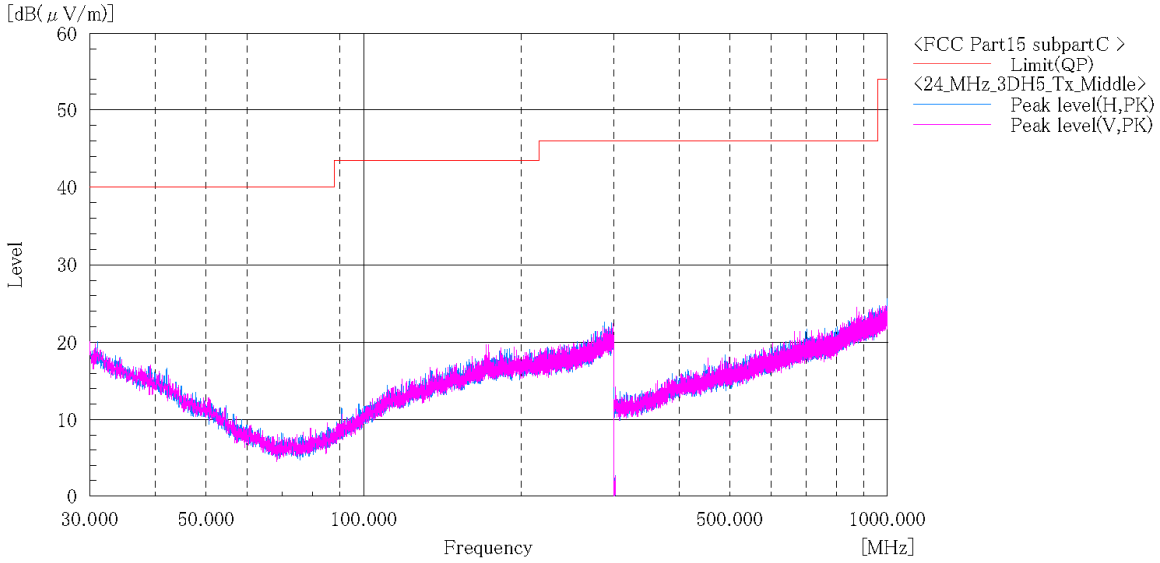
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[3-DH5]
Channel: Middle
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.24>> 2 February,2019 07:00

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_3DH5_Tx_ch:Mid	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 9kHz to 30MHz at the 3 meters distance.

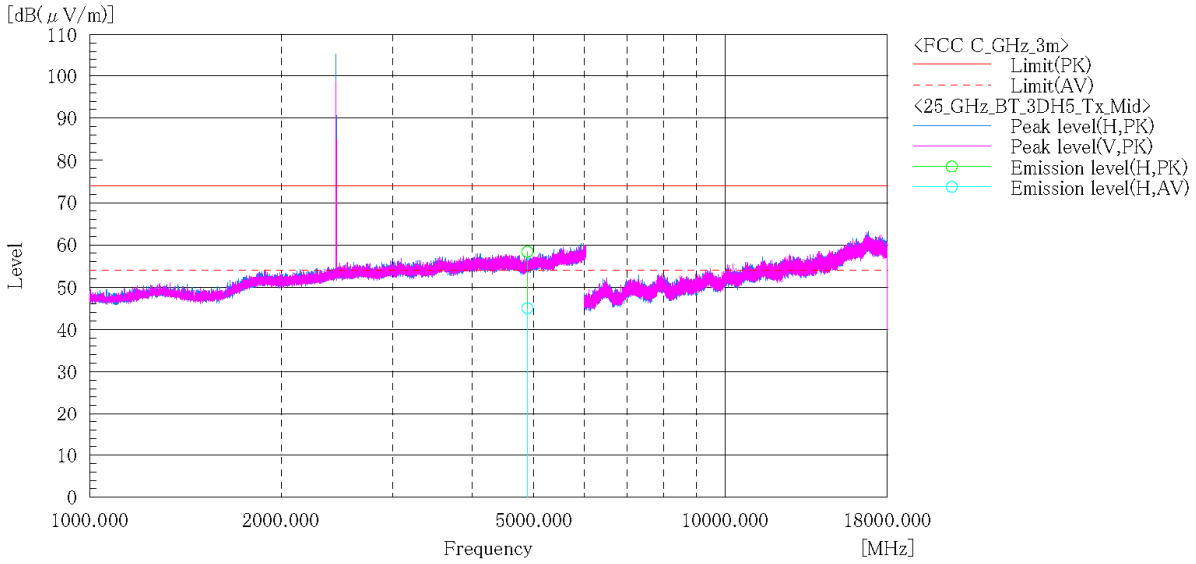
Japan

[3-DH5]
Channel: Middle
ABOVE 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.25>> 25 January,2019 11:03

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart C
EUT	: Mobile Phone	Operator	: T.Watanabe
Model No.	: JA53	Temp,Hum,Atm	: 20.9[℃] 27.9[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_3DH5_Tx_ch:Middle	Note2	:



Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4882.000	H	49.2	35.8	9.2	58.4	45.0	74.0	54.0	15.6	9.0	139.0	129.0	

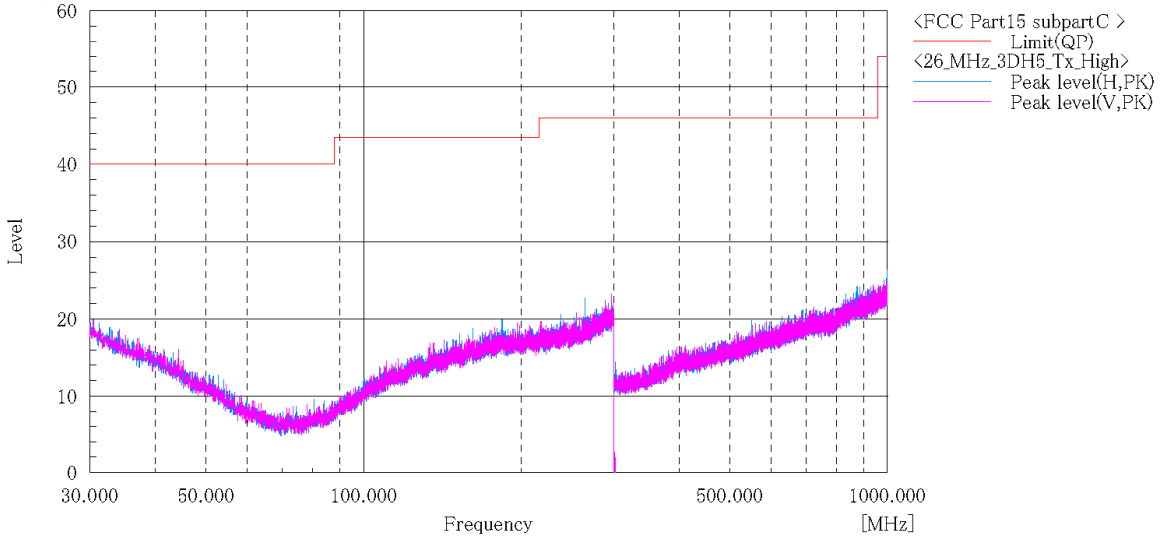
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[3-DH5]
Channel: High
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.26>> 2 February,2019 07:20

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_3DH5_Tx_ch:High	Note2	:



Final Result

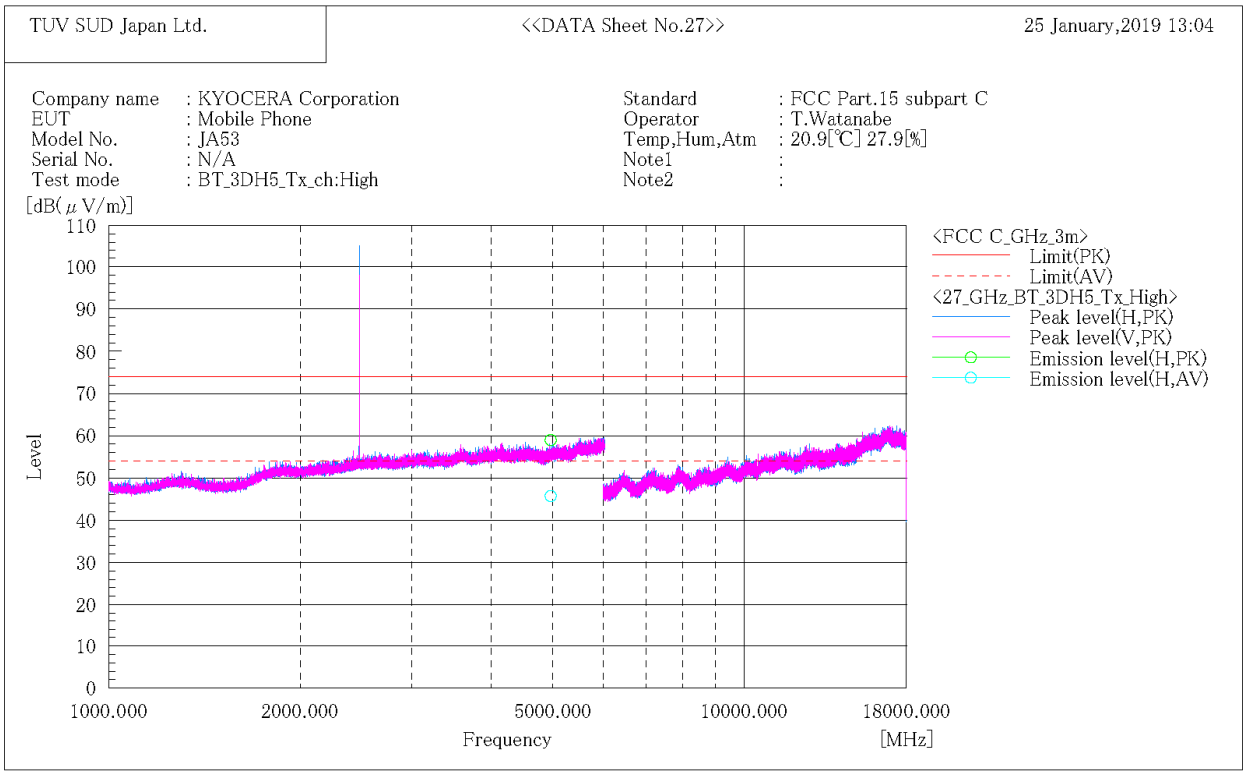
No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]	Remark

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 30MHz at the 3 meters distance.

Japan

[3-DH5]
Channel: High
ABOVE 1 GHz

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



Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Remark
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]	
1	4960.000	H	49.2	35.9	9.8	59.0	45.7	74.0	54.0	15.0	8.3	161.0	99.0	

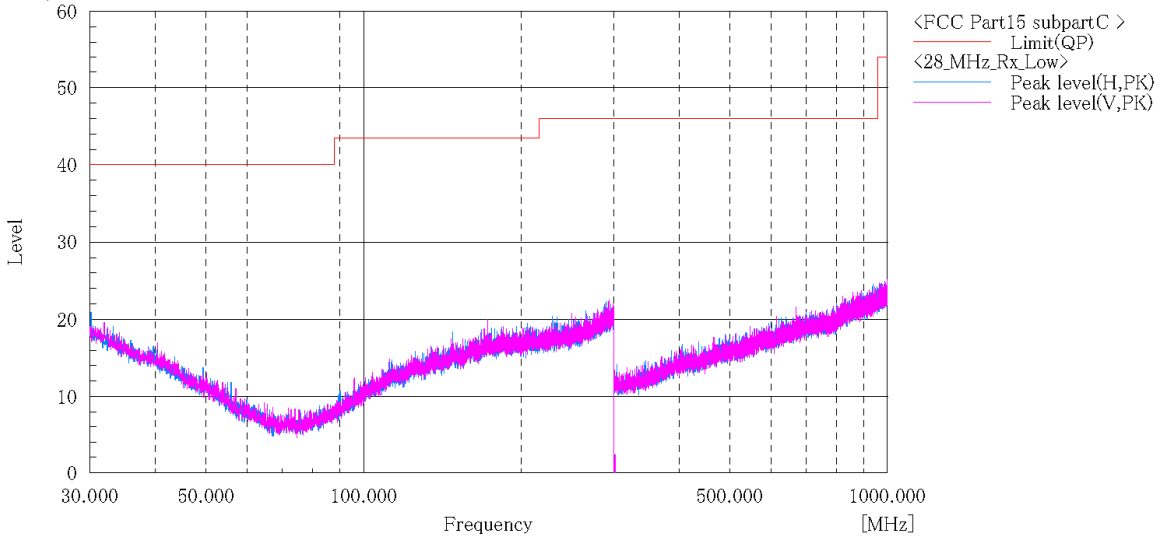
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

[Receive mode - Without camera]
Channel: Low
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.28>> 2 February,2019 07:40

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_Rx_ch:Low	Note2	:



Final Result

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

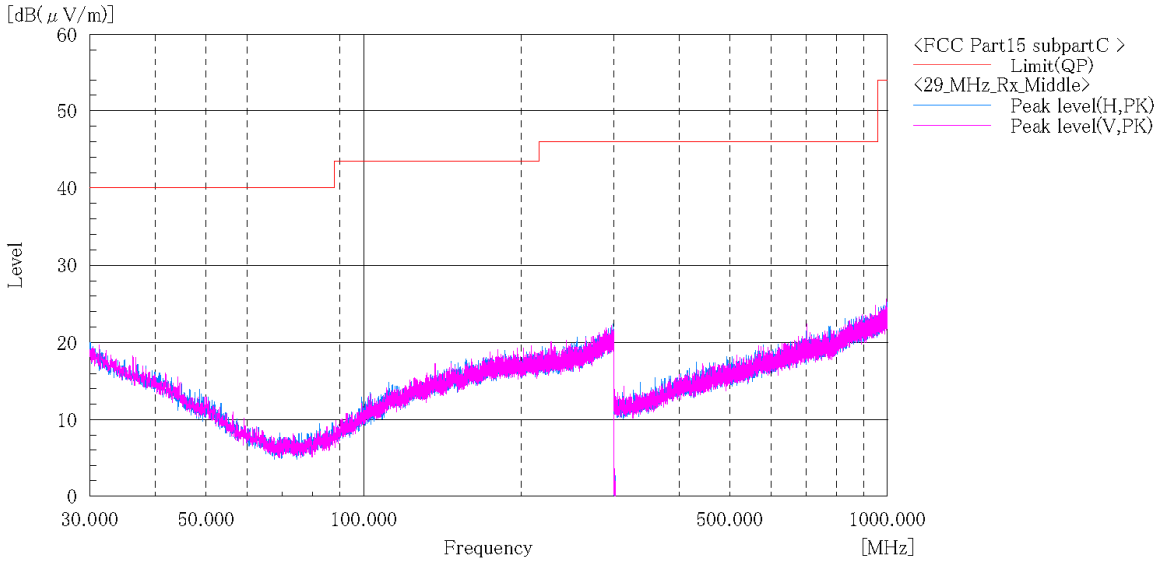
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 30MHz and 1GHz to 25GHz at the 3 meters distance.

Channel: Middle
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.29>> 2 February,2019 08:00

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_Rx_ch:Mid	Note2	:



Final Result

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

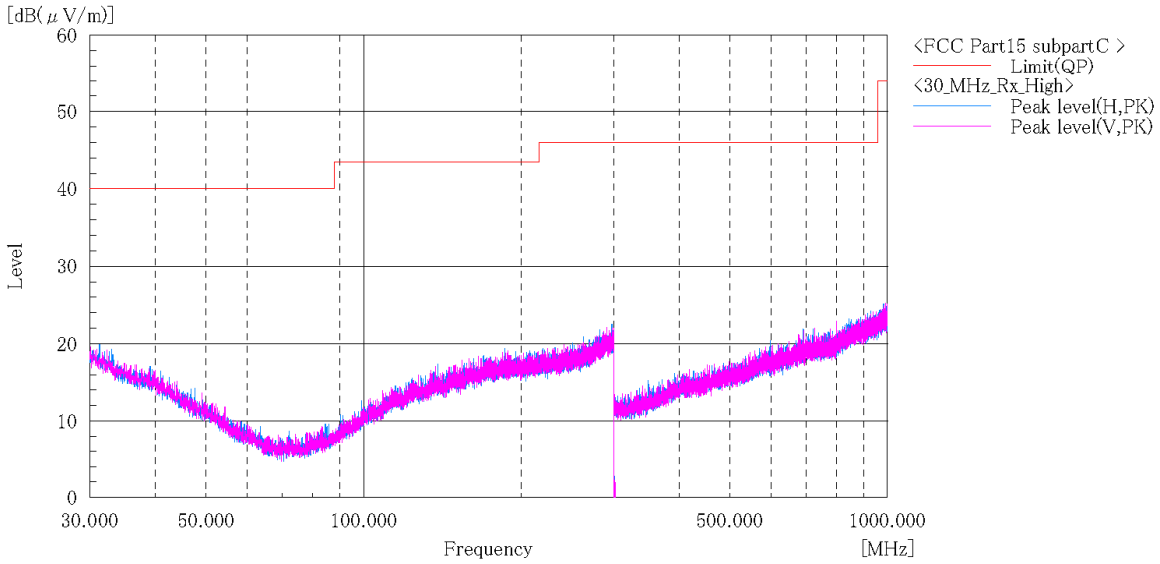
Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 30MHz and 1GHz to 25GHz at the 3 meters distance.

Channel: High
BELOW 1 GHz

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

TUV SUD Japan Ltd. <<DATA Sheet No.30>> 2 February,2019 08:20

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartC
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: JA53	Temp,Hum	: 18.3[℃] 27.1[%]
Serial No.	: N/A	Note1	:
Test mode	: BT_Rx_ch:High	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 9kHz to 30MHz and 1GHz to 25GHz at the 3 meters distance.