Report on the RF Testing of:

KYOCERA Corporation

Mobile Phone, Model: EB1207

FCC ID: JOYEB1207

TÜV

In accordance with FCC Part15 Subpart E (DFS)

Prepared for: KYOCERA Corporation

Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku

Yokohama-shi, Kanagawa, Japan

Phone: +81-45-943-6253 Fax: +81-45-943-6314

COMMERCIAL-IN-CONFIDENCE

Document Number: JPD-TR-24134-0



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

EXECUTIVE SUMMARY - Result: Complied

A sample(s) of this product was tested and the result above was confirmed in accordance with FCC Part15 Subpart E.



DISCLAIMER AND COPYRIGHT

The results in this report are applicable only to the equipment tested.

This report shall not be re-produced except in full without the written approval of TÜV SÜD Japan Ltd.

Client provided data, for which TÜV SÜD Japan Ltd. take no responsibility, which can affect validity of results within this report is clearly identified.

ACCREDIATION

This test report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government.

TÜV SÜD Japan Ltd. Yonezawa Testing Center 5-4149-7 Hachimanpara, Yonezawa-shi, Yamagata, 992-1128 Japan Phone: +81 (0) 238 28 2881 www.tuvsud.com/ja-jp



Contents

1	Summary of Test	3
1.1 1.2	Modification history of the test report	
1.3	Test methods	
1.4	Deviation from standards	
1.5	List of applied test(s) of the EUT	
1.6	Test information	
1.7	Test set up	
1.8	Test period	
2	Equipment Under Test	4
	ormation in this chapter was provided by the applicant	
2.1	EUT information	
2.2	Modification to the EUT	
2.3	Variation of family model(s)	
2.4 2.5	Description of EUT EUT Maximum Conducted Power	
2.5 2.6	Transmit Power Control (TPC)	
2.7	Statement of Manufacturer	
2.8	U-NII DFS Rule Requirements	
2.9	Parameters of DFS Test Signals	
3	Configuration of Equipment	11
3.1	Equipment used	11
3.2	Support Unit used	
4	Test Result	12
4.1	DFS Detection Threshold Levels	12
4.2	Channel Loading/Data Streaming	
4.3	Channel Closing Transmission Time and Channel Move Time	
4.4	Non-Occupancy Period	20
5	Measurement uncertainty	22
6	Laboratory Information	23
Appen	ndix A. Test Equipment	24



1 Summary of Test

1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPD-TR-241134	First Issue	Refer to the cover page

1.2 Standards

CFR47 FCC Part 15 Subpart E FCC 14-30

1.3 Test methods

ANSI C63.10-2013 KDB905462 D02 UNII DFS Compliance Procedures New Rules v02 KDB905462 D03 UNII Clients Without Radar Detection New Rules v01r02

1.4 Deviation from standards

None

1.5 List of applied test(s) of the EUT

Test item section	Test item	Condition	Result	Remark
KDB905462 D02 (8.2)	DFS Detection Threshold Levels	Radiated	PASS	-
KDB905462 D02 (7.7, 8.3)	Channel Loading/Data Streaming	Radiated	PASS	-
KDB905462 D02 (5.1, 5.2, 5.3, 6.1, 7.3.3, 7.6.1, 7.8.3)	Channel Closing Transmission Time and Channel Move Time	Radiated	PASS	-
KDB905462 D02 (5.1.2, 5.2, 5.3, 6.1, 7.3.3, 7.6.1, 7.8.3) KDB905462 D03	Non-Occupancy Period	Radiated	PASS	-

1.6 Test information

The only difference with EB1190EM (FCC ID: JOYPC9699) is that EB1207 does not have a Cellular component.

Therefore, this measurement data is the same as that of EB1190EM.

1.7 Test set up

Table-top

1.8 Test period

31-May-2024 - 3-June-2024



2 Equipment Under Test

All information in this chapter was provided by the applicant.

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 EB1190EM

Serial number 353343640002991, 353343640002918, 353343640002926

Trade name Kyocera

Number of sample(s) 3

EUT condition Pre-Production

Power rating Battery: DC 3.87 V

Size (W) 73.0 mm \times (D) 157.0 mm \times (H) 11.43 mm

Environment Indoor and Outdoor use

Terminal limitation -20°C to 60°C

Hardware version DMT1

Software version 0.151BX.0025.a Firmware version Not applicable

RF Specification

Protocol IEEE802.11a,

IEEE802.11n (HT20), IEEE802.11n (HT40) IEEE802.11ac (VHT20), IEEE802.11ac (VHT40),

EEE802.11ac (VHT80)

Frequency range IEEE802.11a/n/ac (HT20/VHT20): 5180 MHz-5320 MHz, 5500 MHz-5720 MHz

IEEE802.11n/ac (HT40/VHT40): 5190 MHz-5310 MHz, 5510 MHz-5710 MHz IEEE802.11ac (VHT80): 5210 MHz, 5290 MHz, 5530 MHz, 5610 MHz, 5690 MHz

Number of RF Channels IEEE802.11a/n/ac (HT20/VHT20): 20 Channels

IEEE802.11n/ac (HT40/VHT40): 10 Channels

IEEE802.11ac (VHT80): 5 Channels

Modulation type IEEE802.11a/n/ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)

Channel separation IEEE802.11a/n(HT20) / IEEE802.11ac (VHT20): 20 MHz

IEEE802.11n (HT40) / IEEE802.11ac (VHT40): 40 MHz

IEEE802.11ac (VHT80): 80 MHz

Output power 33.435 mW (IEEE802.11a)

(W53 or W56) 34.108 mW (IEEE802.11n: HT20)

35.440 mW (IEEE802.11n: HT40) 34.029 mW (IEEE802.11ac: VHT80)



DFS Function Client (Without Radar Detection)

TPC Function 500mW not required

Antenna type Internal antenna

Antenna gain 5.15-5.35 GHz band: 4.8 dBi

5.47-5.725 GHz band: 5.4 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: EB1190EM, Serial Number: 353343640002991, 353343640002918, 353343640002926				
0	As supplied by the applicant	Not Applicable	Not Applicable	

2.3 Variation of family model(s)

2.3.1 List of family model(s)

Not applicable

2.3.2 Reason for selection of EUT

Not applicable



2.4 Description of EUT

Operational Mode	Operational Frequency Range		
Operational Mode	5250-5350MHz	5470-5725MHz	
Client without radar detection and adhoc function	Applicable	Applicable	

For FCC and IC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges excluding the 5600-5650 MHz range.

2.5 EUT Maximum Conducted Power

	Frequency Band	Maximum Conducted Output Power		Maximum EIRP	
Mode	(MHz)	Test Result (dBm)	Test Result (mW)	Antenna Gain (dBi)	Result (mW)
802.11a	5250-5350	13.737	23.643	4.8	71.400
802.11a	5470-5725	14.477	28.035	5.4	97.208

	Frequency Band	Maximum Conducted Output Power Maximum EIRP		n EIRP	
Mode	(MHz)	Test Result (dBm)	Test Result (mW)	Antenna Gain (dBi)	Result (mW)
802.11n	5250-5350	13.720	23.550	4.8	71.121
(20MHz)	5470-5725	14.580	28.708	5.4	99.541

	Frequency Band	Maximum Conducted Output Power		Maximum EIRP	
Mode	(MHz)	Test Result (dBm)	Test Result (mW)	Antenna Gain (dBi)	Result (mW)
802.11n	5250-5350	13.767	23.807	4.8	71.895
(40MHz)	5470-5725	14.777	30.040	5.4	104.160

	Frequency Band	Maximum Conducted Output Power Maximum EIRP		Maximum Conducted Output Power		n EIRP
Mode	(MHz)	Test Result (dBm)	Test Result (mW)	Antenna Gain (dBi)	Result (mW)	
802.11ac	5250-5350	13.728	23.594	4.8	71.252	
(80MHz)	5470-5725	14.568	28.629	5.4	99.266	

2.6 Transmit Power Control (TPC)

U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an E.I.R.P. of less than 500 mW.

Maximum EIRP of this device is 104.160 mW which less than 500mW, therefore it's not require TPC function.



2.7 Statement of Manufacturer

Manufacturer statement confirming that information regarding the parameters of the detected Radar Waveforms is not available to the end user. And the device doesn't have Ad Hoc mode on DFS frequency band.

2.8 U-NII DFS Rule Requirements

The manufacturer shall state whether the UUT is capable of operating as a Master and/or a Client. If the UUT is capable of operating in more than one operating mode then each operating mode shall be tested separately.

DFS Requirements Prior to Use of a Channel

KDB905462 D02

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

	Operational Mode				
Requirement	Master	Client Without Radar Detection	Client With Radar Detection		
Non-Occupancy Period	Yes	Not required	Yes		
DFS Detection Threshold	Yes	Not required	Yes		
Channel Availability Check Time	Yes	Not required	Not required		
U-NII Detection Bandwidth	Yes	Not required	Yes		

DFS requirements during normal operation

KDB905462 D02

Table 2: Applicability of DFS requirements during normal operation

	Operational Mode			
Requirement	Master Device or Client with Radar Detection	Client Without Radar Detection		
DFS Detection Threshold	Yes	Not required		
Channel Closing Transmission Time	Yes	Yes		
Channel Move Time	Yes	Yes		
U-NII Detection Bandwidth	Yes	Not required		

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection			
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required			
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link			
All other tests	Any single BW mode	Not required			
Note: Fraguencies calested for statistical performance check (Costion 7.9.4) should include					

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.



DFS Detection Thresholds

KDB905462 D02

Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Response Requirements

KDB905462 D02

Table 4: provides the response requirements for Master and Client Devices incorporating DFS.

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.



2.9 Parameters of DFS Test Signals

Short Pulse Radar Test Waveforms

KDB905462 D02

Table 5: Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials			
0	1	1428	18	See Note 1	See Note 1			
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected	Roundup: {(1/360) x (19 x 10 ⁶ PRlusec)}	60%	30			
2	1-5	in Test A 150-230	23-29	60%	30			
3	6-10	200-500	16-18	60%	30			
4	11-20	200-500	12-16	60%	30			
·			12-10					
	Aggregate (Radar Types 1-4) 80% 120							

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.

Long Pulse Radar Test Waveform

KDB905462 D02

Table 6: Long Pulse Radar Test Waveform

Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30



Frequency Hopping Radar Test Waveform

KDB905462 D02

Table 7: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

3 Configuration of Equipment

This test configuration is based on the manufacture's instruction.

Cabling and setup(s) were taken into consideration and test data was taken under worse case condition.

3.1 Equipment used

No.	Equipment	Company	Model No.	Serial No.	FCC ID / DoC	Comment
1	Mobile Phone	KYOCERA	EB1190EM	353343640002991, 353343640002918, 353343640002926	JOYPC9699	EUT

3.2 Support Unit used

No.	Equipment	Company	Model No.	Serial No.	FCC ID	Comment
а	Access Point	Cisco	AIR-CAP3702E-A-K9	FJC1938F0NV	LDK102087	*1, *2

NOTE: 1. This device was functioned as a Master device during the DFS test.

NOTE: 2. The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is -64 + 1 = -63 dBm.



4 Test Result

4.1 DFS Detection Threshold Levels

4.1.1 Measurement procedure

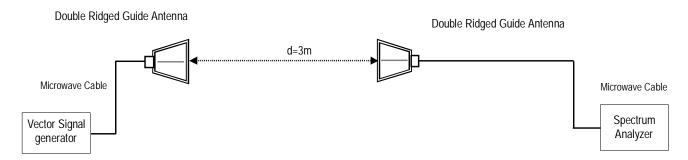
[KDB905462 D02(8.2)]

Spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain - coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of -63 dBm as measured on the spectrum analyzer.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is -64 + 1 = -63 dBm.

The spectrum analyzer is set to;

- RBW=3 MHz, VBW=3 MHz, Span=Zero span Sweep=10ms, Detector=Peak, Trace mode=Clear / write
- Test configuration



4.1.2 Limit

None



4.1.3 **Radar Waveform**

Date 31-May-2024 Temperature : 22.5 [°C]

Humidity : 51.8 [%]

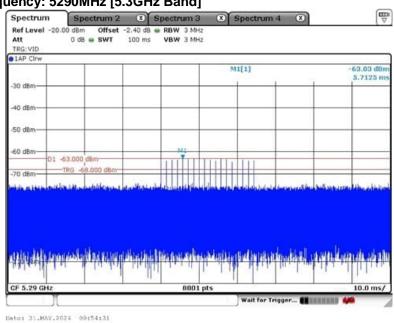
Test engineer Tadahiro Seino

Radar Type 0 Calibration Plot

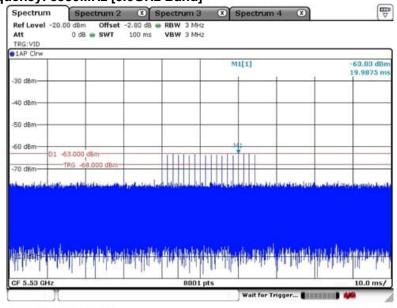
Test place

Frequency: 5290MHz [5.3GHz Band]

: 3m Semi-anechoic chamber







Dato: 31.MAY.2024 01:00:05



4.2 Channel Loading/Data Streaming

4.2.1 Measurement procedure

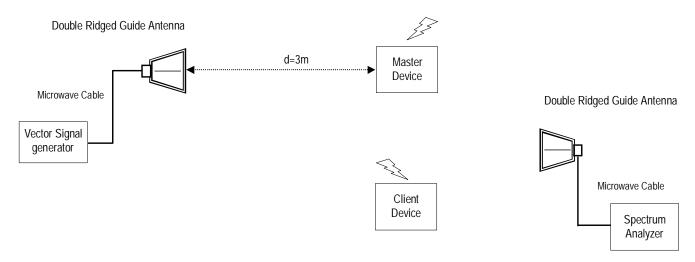
[KDB905462 D02(7.7, 8.3)]

System testing will be performed with channel-loading using means appropriate to the data types that are used by the unlicensed device. The following requirements apply:

- -The data file must be of a type that is typical for the device (i.e., MPEG-2, MPEG-4, WAV, MP3, MP4, AVI, etc.) and must generally be transmitting in a streaming mode.
- -Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater.

The spectrum analyzer is set to;

- RBW=3 MHz, VBW=3 MHz, Span=Zero span Sweep=10ms, Detector=Peak, Trace mode=Clear / write
- Test configuration



4.2.2 Limit

Timing plot duty cycle greater than 17%



4.2.3 Measurement result

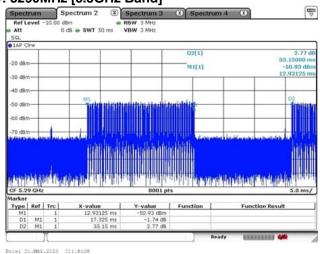
Date : 31-May-2024 Temperature : 22.5 [°C]

Humidity : 51.8 [%]

Test engineer

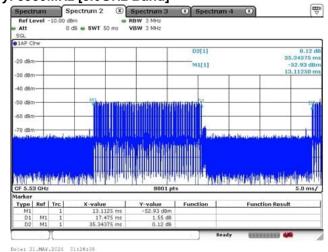
Client device Data Traffic Plot

Frequency: 5290MHz [5.3GHz Band]



ON Time	ON+OFF Time	Duty Cycle
[ms]	[ms]	[%]
17.325	33.15	52.26

Frequency: 5530MHz [5.6GHz Band]



ON Time	ON+OFF Time	Duty Cycle
[ms]	[ms]	[%]
17.475	35.34375	



4.3 Channel Closing Transmission Time and Channel Move Time

4.3.1 Measurement procedure

[KDB905462 D02(5.1, 5.2, 5.3, 6.1, 7.3.3, 7.6.1, 7.8.3)]

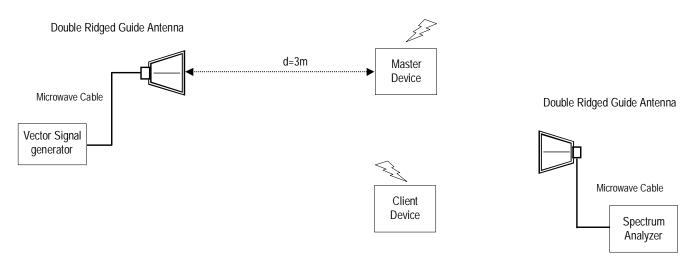
Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

The spectrum analyzer is set to;

RBW=3 MHz, VBW=3 MHz, Span=Zero span
 Sweep=30 s, Detector=Peak, Trace mode=Clear / write

- Test configuration



4.3.2 Limit

- (1) Channel Closing Transmission Time: The Aggregate Transmission Time is within 60ms within the Channel Move Time range excluding 200ms after the radar waveform is detected.
- (2) Channel Move Time: The time to stop all transmissions on the current channel within 10 seconds when a radar waveform above the DFS detection threshold is detected.



4.3.3 Calculation method

Measurement of the aggregate duration of the Channel Closing Transmission Time method.

Dwell[ms]= S[ms] / B[points]

- Dwell is the dwell time per spectrum analyzer sampling bin.
- S is the sweep time.
- B is the number of spectrum analyzer sampling bins.

An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:

C[ms]= N[bins] x Dwell[ms]

- C is the Closing Time.
- N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.

4.3.4 Measurement result

Date : 31-May-2024 Temperature : 22.5 [°C]

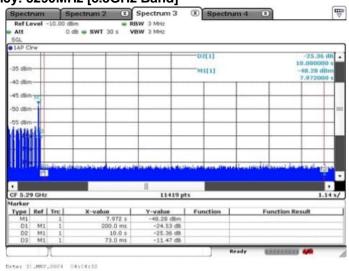
Humidity : 51.8 [%] Test engineer

Test place : 3m Semi-anechoic chamber Tadahiro Seino



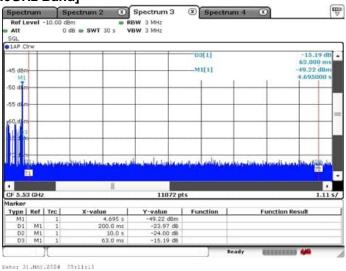
Channel Closing Transmission Time Plot

Frequency: 5290MHz [5.3GHz Band]



S [ms]	B [points]	Dwell [ms]	N [bins]	Aggregate Channel Closing Transmission Time [ms]	Limit [ms]
1140	11419	0.099834	0	0	60

Frequency: 5530MHz [5.6GHz Band]

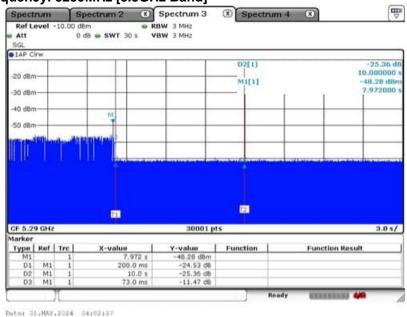


S	B	Dwell	N	Aggregate Channel Closing Transmission Time [ms]	Limit
[ms]	[points]	[ms]	[bins]		[ms]
1110	11072	0.100253	0	0	60



Channel Move Time Plot



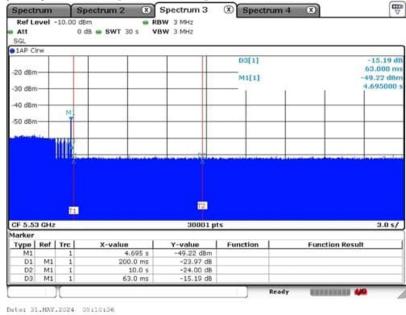


 Channel Move Time
 Limit

 [s]
 [s]

 0.073
 10

Frequency: 5530MHz [5.6GHz Band]



 Channel Move Time
 Limit

 [s]
 [s]

 0.063
 10



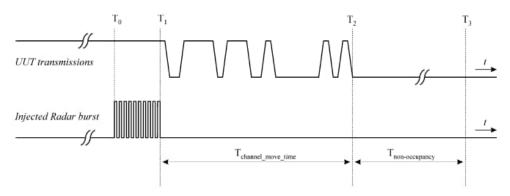
4.4 Non-Occupancy Period

4.4.1 Measurement procedure

[KDB905462 D02(5.1.2, 5.2, 5.3, 6.1, 7.3.3, 7.6.1, 7.8.3), KDB905462 D03]

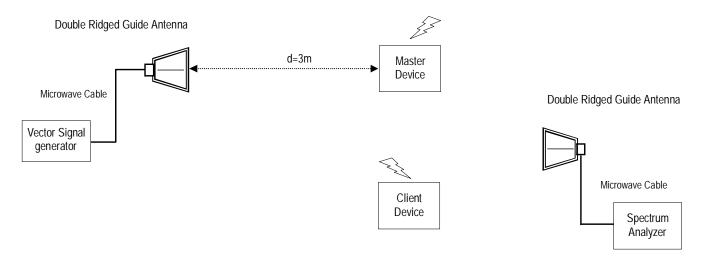
The client test frequency must be monitored to ensure no transmission of any type has occurred for 30 minutes.

If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear.



The spectrum analyzer is set to;

- RBW=3 MHz, VBW=3 MHz, Span=Zero span
 Sweep=2000 s, Detector=Peak, Trace mode=Clear / write
- Test configuration



4.4.2 Limit

The client has vacated the Channel in the specified time (Channel Closing Transmission Time and Channel Move Time) and does not transmit on a Channel for 30 minutes after the detection and Channel move (Non-Occupancy Period).



4.4.3 Measurement result

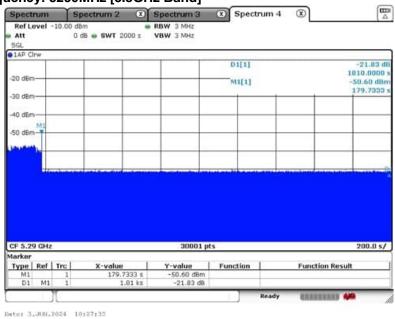
Date : 3-June-2024 Temperature : 20.7 [°C]

Humidity : 58.1 [%] Test engineer

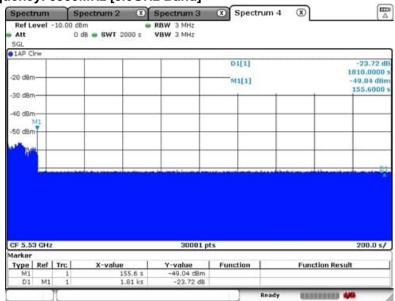
Test place : 3m Semi-anechoic chamber Tadahiro Seino

Non-Occupancy Period Plot

Frequency: 5290MHz [5.3GHz Band]



Frequency: 5530MHz [5.6GHz Band]



Dato: 3.JUN.2024 11:54:36

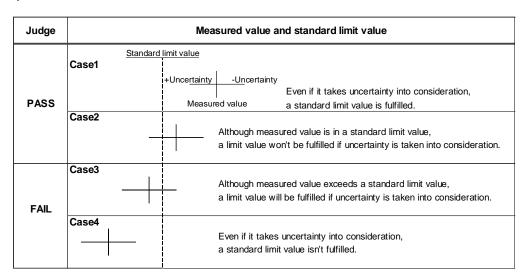


5 Measurement uncertainty

The reported measurement uncertainty is based on a value obtained by multiplying standard uncertainty by coverage factor of k=2, and a level of confidence becomes 95 %.

3m Semi Anechoic Chamber					
Test item	Measurement uncertainty				
Conducted emission, AMN (9 kHz – 150 kHz)	±3.7 dB				
Conducted emission, AMN (150 kHz – 30 MHz)	±3.3 dB				
Radiated emission (9kHz – 30 MHz)	±3.8 dB				
Radiated emission (30 MHz – 1000 MHz)	±5.4 dB				
Radiated emission (1 GHz – 6 GHz)	±4.6 dB				
Radiated emission (6 GHz – 18 GHz)	±4.7 dB				
Radiated emission (18 GHz – 40 GHz)	±6.3 dB				
Radio Frequency	±1.3 * 10 ⁻⁸				
RF power, conducted	±0.7 dB				
Adjacent channel power	±1.5 dB				
Temperature	±0.6 °C				
Humidity	±1.2 %				
Voltage (DC)	±0.4 %				
Voltage (AC, <10kHz)	±0.2 %				

Measurement uncertainty of not listed immunity tests is considered to suffice because requirements of relevant standards are met.





6 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

Accreditation and Registration

A2LA

Certificate #3686.03

VLAC

Accreditation No.: VLAC-013

BSMI

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

Innovation, Science and Economic Development Canada

ISED#: 4224A

VCCI Council

Registration number: A-0166



Appendix A. Test Equipment

Radiated

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
Spectrum analyzer	ROHDE&SCHWARZ	FSV40	101731	31-Aug-2024	16-Aug-2023
Vector Signal Generator	ROHDE&SCHWARZ	SMBV100A	257406	31-Mar-2025	07-Mar-2024
Double ridged guide antenna	ETS LINDGREN	3117	00218815	31-Dec-2024	07-Dec-2023
Attenuator	HUBER+SUHNER	6803.17.B	N/A(2340)	31-Dec-2024	20-Dec-2023
Double ridged guide antenna	ETS LINDGREN	3117	00058232	30-Jun-2024	20-Jun-2023
Microwave cable	HUBER+SUHNER	Sucoflex 102/2m	MY3385/2	31-Mar-2025	07-Mar-2024
Microwave cable	HUBER+SUHNER	SUCOFLEX106/7m	41625/6	31-Dec-2024	21-Dec-2023
PC	HP	HP ProBook 450 G2	JPA524M85J	N/A	N/A
Software	ROHDE&SCHWARZ	R&S Pulse Sequencer DFS	V1.4 Build:6130	N/A	N/A
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-NSA)	31-May-2025	14-May-2024
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-SVSWR)	31-May-2025	14-May-2024

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