




RADIO TEST REPORT


Test Report No. : 10017505H-B

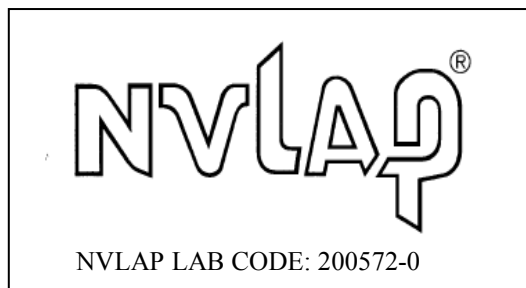
Applicant : Sony Computer Entertainment Inc.
Type of Equipment : Development Kit (for PlayStation®4)
Model No. : DUH-D1000AA
FCC ID : AK8DUTD1000
Test regulation : FCC Part 15 Subpart C: 2012
*Bluetooth (BDR/EDR) Part
Test Result : Complied

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the above regulation.
4. The test results in this report are traceable to the national or international standards.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Date of test: June 5 to 12, 2013

Representative test engineer: 
Takumi Shimada
Engineer of WiSE Japan,
UL Verification Service

Approved by: 
Masanori Nishiyama
Manager of WiSE Japan,
UL Verification Service



This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation. *As for the range of Accreditation in NVLAP, you may refer to the WEB address, <http://www.ul.com/japan/jpn/pages/services/emc/about/mark1/index.jsp#nvlap>

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13-EM-F0429

CONTENTS	PAGE
SECTION 1: Customer information.....	4
SECTION 2: Equipment under test (E.U.T.).....	4
SECTION 3: Test specification, procedures & results.....	6
SECTION 4: Operation of E.U.T. during testing.....	9
SECTION 5: Conducted Emission.....	11
SECTION 6: Radiated Spurious Emission	12
SECTION 7: Antenna Terminal Conducted Tests.....	13
APPENDIX 1: Data of EMI test.....	14
Conducted Emission	14
20dB Bandwidth and Carrier Frequency Separation.....	18
Number of Hopping Frequency	21
Dwell time.....	23
Maximum Peak Output Power	26
Radiated Spurious Emission	27
Conducted Spurious Emission	33
Conducted Emission Band Edge compliance	45
99%Occupied Bandwidth	47
APPENDIX 2: Test instruments	49
APPENDIX 3: Photographs of test setup	50
Conducted Emission	50
Radiated Spurious Emission	51
Worst Case Position (Horizontal: Y-axis/ Vertical:X-axis).....	52
Test Configuration and peripherals.....	53

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SECTION 1: Customer information

Company Name	Sony Computer Entertainment Inc.
Brand Name	SONY
Address	1-7-1 Konan, Minato-ku, Tokyo, 108-0075 Japan
Telephone Number	+81-3-6748-6333
Facsimile Number	+81-3-6748-6383
Contact Person	Kiyoto Sasaki

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment	Development Kit (for PlayStation®4)
Model No	DUH-D1000AA
Serial No	20689DD2A5A3 for Antenna Terminal Conducted test 3200020 for Conducted Emission and Radiated Emission tests
Country of Manufacture	Japan
Receipt Date of Sample	June 3, 2013
Condition of EUT	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	No modification by the test lab.

2.2 Product Description

DUH-D1000AA is the Development Kit (for PlayStation®4).

Product Specification

Maximum clock frequency in the system	2.75GHz
Operating Temperature	5-35 deg. C
Power Supply	AC100-240V, 50Hz/60Hz
Size	370 x 118 x 226 mm
Weight	Approx. 6kg

Radio Specification

WLAN (IEEE802.11b/g/n-20/n-40)

Equipment Type	Transceiver
Frequency of Operation	2412-2462MHz (IEEE802.11b/g/n-20) 2422-2452MHz (IEEE802.11n-40)
Type of Modulation	DSSS, OFDM
Bandwidth & Channel spacing	20MHz & 5MHz (IEEE802.11b/g/n-20) 40MHz & 5MHz (IEEE802.11n-40)
Method of frequency generation	Synthesizer
Power Supply (inner)	DC3.3V/1.8V
Antenna Type	PIFA (Antenna A/B)
Antenna Gain: G_{ANT}	2.0dBi (Antenna A/B)
Directional Gain	5.0dBi (Antenna A/B)

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Bluetooth (BDR/EDR)

Equipment Type	Transceiver
Frequency of Operation	2402-2480MHz
Type of Modulation	FHSS (GFSK, $\pi/4$ DQPSK, 8DPSK)
Bandwidth & Channel spacing	1MHz & 1MHz
Method of frequency generation	Synthesizer
Power Supply (inner)	DC3.3V/1.8V
Antenna Type	PIFA
Antenna Gain	2.0dBi (peak)

Bluetooth (Low Energy)

Equipment Type	Transceiver
Frequency of Operation	2402-2480MHz
Type of Modulation	GFSK
Bandwidth & Channel spacing	1MHz & 2MHz
Method of frequency generation	Synthesizer
Power Supply (inner)	DC3.3V/1.8V
Antenna Type	PIFA
Antenna Gain	2.0 dBi (peak)

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : Test specification: FCC Part 15 Subpart C: 2012, final revised on December 27, 2012 and effective January 28, 2013

Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.247 Operation within the bands 902-928MHz,
2400-2483.5MHz, and 5725-5850MHz

3.2 Procedures and results

Item	Test Procedure	Specification	Worst Margin	Results	Remarks	
Conducted Emission	FCC: ANSI C63.4:2003 7. AC powerline conducted emission measurements IC: RSS-Gen 7.2.4	FCC: Section 15.207 ----- IC: RSS-Gen 7.2.4	QP 10.4dB, 1.19764MHz, N 0.97624MHz, N AV 4.9dB, 0.54033MHz, L 0.54130MHz, N	Complied	-	
Carrier Frequency Separation	FCC: FCC Public Notice DA 00-705 ----- IC: -	FCC: Section15.247(a)(1) ----- IC: RSS-210 A8.1 (b)	See data.	Complied	Conducted	
20dB Bandwidth	FCC: FCC Public Notice DA 00-705 ----- IC: -	FCC: Section15.247(a)(1) ----- IC: RSS-210 A8.1 (a)		Complied	Conducted	
Number of Hopping Frequency	FCC: FCC Public Notice DA 00-705 ----- IC: -	FCC: Section15.247(a)(1)(iii) ----- IC: RSS-210 A8.1 (d)		Complied	Conducted	
Dwell time	FCC: FCC Public Notice DA 00-705 ----- IC: -	FCC: Section15.247(a)(1)(iii) ----- IC: RSS-210 A8.1 (d)		Complied	Conducted	
Maximum Peak Output Power	FCC: FCC Public Notice DA 00-705 ----- IC: RSS-Gen 4.8	FCC: Section15.247(a)(b)(1) ----- IC: RSS-210 A8.4 (2)		Complied	Conducted	
Spurious Emission & Band Edge Compliance	FCC: FCC Public Notice DA 00-705 ----- IC: RSS-Gen 4.9	FCC: Section15.247(d) ----- IC: RSS-210 A8.5 RSS-Gen 6 and 7.2.3		5.7dB 742.480MHz, QP, Hori.	Complied	Conducted/ Radiated

Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422.

* In case any questions arise about test procedure, ANSI C63.4: 2003 is also referred.

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FCC 15.31 (e)

This EUT provides stable voltage(DC3.3/1.8V) constantly to RF Part regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.3 Addition to standard

Item	Test Procedure	Specification	Worst margin	Results	Remarks
99% Occupied Bandwidth	IC: RSS-Gen 4.6.1	IC: RSS-Gen 4.6.1	N/A	-	Conducted

Other than above, no addition, exclusion nor deviation has been made from the standard.

3.4 Uncertainty

EMI

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

Test room (semi-anechoic chamber)	Conducted emission (+dB)
	150kHz-30MHz
No.1	3.5dB
No.2	3.6dB
No.3	3.6dB
No.4	3.6dB

Test room (semi-anechoic chamber)	Radiated emission						
	(3m*)(+dB)				(1m*)(+dB)		(0.5m*)(+dB)
	9kHz -30MHz	30MHz -300MHz	300MHz -1GHz	1GHz -10GHz	10GHz -18GHz	18GHz -26.5GHz	26.5GHz -40GHz
No.1	4.3dB	5.0dB	5.1dB	4.9dB	5.8dB	4.4dB	4.3dB
No.2	4.3dB	5.2dB	5.1dB	5.0dB	5.7dB	4.3dB	4.2dB
No.3	4.6dB	5.0dB	5.1dB	5.0dB	5.7dB	4.5dB	4.2dB
No.4	4.8dB	5.2dB	5.0dB	5.0dB	5.7dB	5.2dB	4.2dB

*3m/1m/0.5m = Measurement distance

Power meter (+dB)	
Below 1GHz	Above 1GHz
0.7dB	1.5dB

Antenna terminal conducted emission and Power density (+dB)			Antenna terminal conducted emission (+dB)		Channel power (+dB)
Below 1GHz	1GHz-3GHz	3GHz-18GHz	18GHz-26.5GHz	26.5GHz-40GHz	
1.5dB	1.7dB	2.8dB	2.8dB	2.9dB	2.6dB

Conducted Emission test

The data listed in this test report has enough margin, more than the site margin.

Radiated emission test(3m)

The data listed in this test report has enough margin, more than the site margin.

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3.5 Test Location

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	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	313583	2973C-1	19.2 x 11.2 x 7.7m	7.0 x 6.0m	No.1 Power source room
No.2 semi-anechoic chamber	655103	2973C-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 semi-anechoic chamber	148738	2973C-3	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.3 Preparation room
No.3 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.4 semi-anechoic chamber	134570	2973C-4	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.4 Preparation room
No.4 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.5 semi-anechoic chamber	-	-	6.0 x 6.0 x 3.9m	6.0 x 6.0m	-
No.6 shielded room	-	-	4.0 x 4.5 x 2.7m	4.75 x 5.4 m	-
No.6 measurement room	-	-	4.75 x 5.4 x 3.0m	4.75 x 4.15 m	-
No.7 shielded room	-	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.8 measurement room	-	-	3.1 x 5.0 x 2.7m	N/A	-
No.9 measurement room	-	-	8.8 x 4.6 x 2.8m	2.4 x 2.4m	-
No.11 measurement room	-	-	3.1 x 3.4 x 3.0m	2.4 x 3.4m	-

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m for No.1, No.2, No.3, and No.4 semi-anechoic chambers and No.3 and No.4 shielded rooms.

3.6 Data of EMI, Test instruments, and Test set up

Refer to APPENDIX.

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SECTION 4: Operation of E.U.T. during testing

4.1 Operating Mode(s)

Bluetooth (BT): Transmitting (Tx), Payload: PRBS9
Inquiry

Details of Operating Mode(s)

Test Item	Mode	Tested frequency
Conducted Emission Spurious Emission (Conducted/Radiated)	Tx (Hopping off) DH5, 3DH5	2402MHz 2441MHz 2480MHz
20dB Bandwidth Maximum Peak Output Power	Tx (Hopping off) DH5, 3DH5 Inquiry	2402MHz 2441MHz 2480MHz
Number of Hopping Frequency Carrier Frequency Separation	Tx (Hopping on) DH5, 3DH5 Inquiry	-
Dwell time	Tx (Hopping on), -DH1, DH3, DH5 -3DH1, 3DH3, 3DH5 Inquiry	-
Band Edge Compliance (Conducted)	Tx DH5, 3DH5 -Hopping on -Hopping off	2402MHz 2480MHz
99% Occupied Bandwidth	Tx DH5, 3DH5 -Hopping on -Hopping off	2402MHz 2441MHz 2480MHz
<p>*As a result of preliminary test, the formal test was performed with the above modes, which had the maximum payload length (except Dwell time test) *EUT has the power settings by the software as follows; Power settings: Same as production model Software: COpro_DOS_Labtool_Ver1.0.8.24 *This setting of software is the worst case. Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product.</p>		

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4.2 Configuration and peripherals

This page has been submitted for a separate exhibit.

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a urethane platform of nominal size, 1.0m by 1.5m, raised 0.8m above the conducting ground plane.

The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center.

For the tests on EUT with other peripherals (as a whole system)

I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. All unused 50ohm connectors of the LISN(AMN) were resistivity terminated in 50ohm when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber .

The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

The test results and limit are rounded off to one decimal place, so some differences might be observed.

Detector	: QP and CISPR AV
Measurement range	: 0.15-30MHz
Test data	: APPENDIX
Test result	: Pass

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SECTION 6: Radiated Spurious Emission

Test Procedure

EUT was placed on a urethane platform of nominal size, 1.0m by 1.5m, raised 0.8m above the conducting ground plane.

The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

The height of the measuring antenna varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field strength.

The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer.

The measurements were made with the following detector function of the test receiver and the Spectrum analyzer (in linear mode).

The test was made with the detector (RBW/VBW) in the following table.

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

Test Antennas are used as below;

Frequency	Below 30MHz	30MHz to 300MHz	300MHz to 1GHz	Above 1GHz
Antenna Type	Loop	Biconical	Logperiodic	Horn

In any 100kHz bandwidth outside the restricted band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

20dBc was applied to the frequency over the limit of FCC 15.209 / Table 5 of RSS-Gen 7.2.5 (IC) and outside the restricted band of FCC15.205 / Table 3 of RSS-Gen 7.2.2 (IC).

Frequency	Below 1GHz	Above 1GHz		20dBc
Instrument used	Test Receiver	Spectrum Analyzer		Spectrum Analyzer
Detector	QP	PK	AV	PK
IF Bandwidth	BW 120kHz(T/R)	RBW: 1MHz VBW: 3MHz	RBW: 1MHz VBW: 10Hz *1)	RBW: 100kHz VBW: 300kHz (S/A)
Test Distance	3m	3m (below 10GHz), 1m*2) (above 10GHz)		3m (below 10GHz), 1m*2) (above 10GHz)

*1) Although 00-705 accepts VBW=10Hz for AV measurements, it was confirmed that superfluous smoothing was not performed.”

*2) Distance Factor: $20 \times \log(3.0\text{m}/1.0\text{m}) = 9.5\text{dB}$

- The carrier level and noise levels were confirmed at each position of X and Y axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

The test results and limit are rounded off to one decimal place, so some differences might be observed.

Measurement range : 30M-26.5GHz
Test data : APPENDIX
Test result : Pass

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SECTION 7: Antenna Terminal Conducted Tests

Test Procedure

The tests were made with below setting connected to the antenna port.

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used
20dB Bandwidth	3MHz	30kHz	100kHz	Auto	Peak	Max Hold	Spectrum Analyzer
99% Occupied Bandwidth	Enough width to display 20dB Bandwidth	1 to 3% of Span	Three times of RBW	Auto	Peak	Max Hold *1)	Spectrum Analyzer
Maximum Peak Output Power	-	-	-	Auto	Peak	-	Power Meter (Sensor: 50MHz BW)
Carrier Frequency Separation	5MHz, 3MHz	100kHz, 30kHz	300kHz, 100kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Number of Hopping Frequency	30MHz	300kHz	1MHz	Auto	Peak	Max Hold	Spectrum Analyzer
Dwell Time	Zero Span	100kHz, 1MHz	300kHz, 3MHz	As necessary capture the entire dwell time per hopping channel	Peak	Max Hold	Spectrum Analyzer
Conducted Spurious Emission *2)	9kHz to 150kHz	200Hz	620Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150kHz to 30MHz	9.1kHz	27kHz				
	30MHz to 25GHz (Less or equal to 5GHz)	100kHz	300kHz				
Conducted Spurious Emission Band Edge compliance	10MHz	100kHz	300kHz	Auto	Peak	Max Hold	Spectrum Analyzer

*1) The measurement was performed with Max Hold since the duty cycle was not 100%.
*2) In the frequency range below 30MHz, RBW was narrowed to separate the noise contents. Then, wide-band noise near the limit was checked separately, however the noise was not detected as shown in the chart.(9kHz-150kHz:RBW=200Hz, 150kHz-30MHz:RBW=9.1kHz)

The test results and limit are rounded off to two decimals place, so some differences might be observed.

Test data : **APPENDIX**
Test result : **Pass**

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APPENDIX 1: Data of EMI test

Conducted Emission

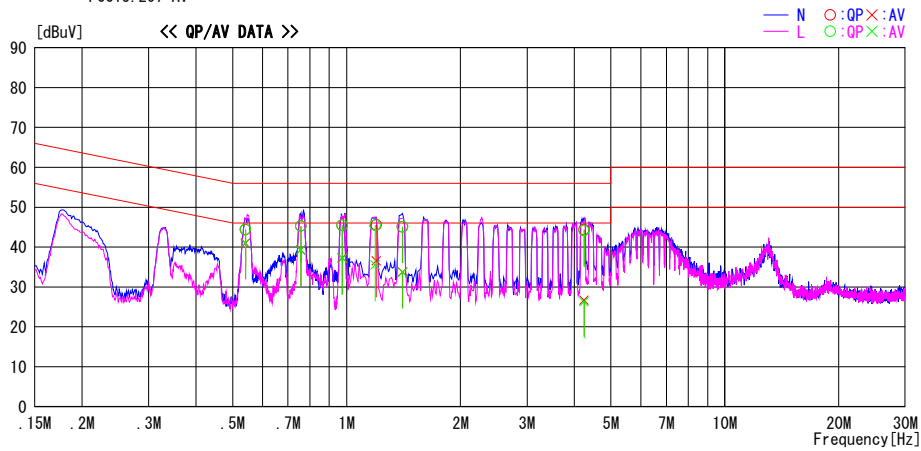
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2013/06/09

Report No. : 10017505H
Temp./Humi. : 23deg. C / 54% RH
Engineer : Takumi Shimada

Mode / Remarks : BT DH5 2480MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

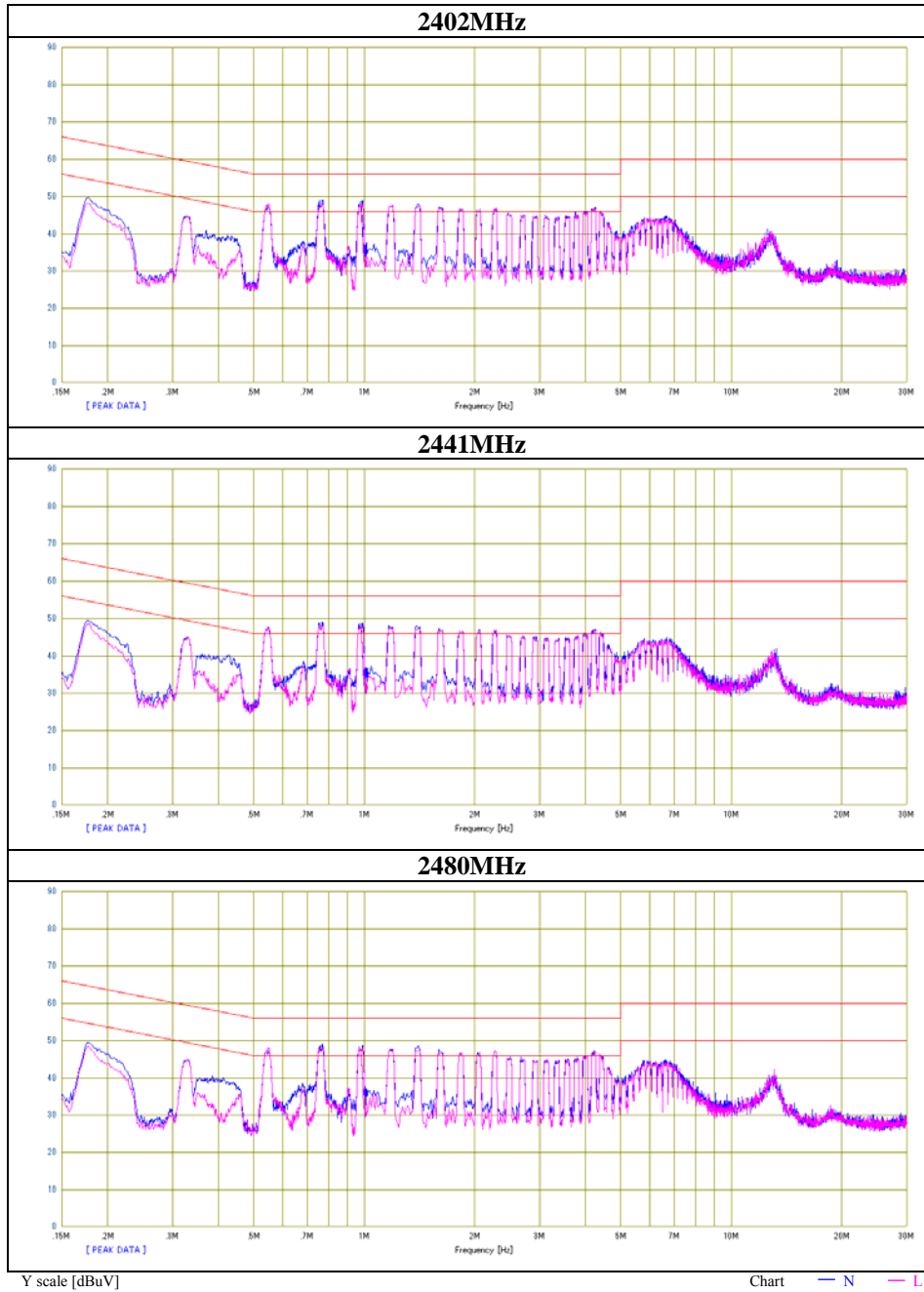


Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.54041	31.1	27.7	13.3	44.4	41.0	56.0	46.0	11.6	5.0	N	
0.75754	31.9	25.9	13.4	45.3	39.3	56.0	46.0	10.7	6.7	N	
0.97413	32.1	23.9	13.4	45.5	37.3	56.0	46.0	10.5	8.7	N	
1.19764	32.1	23.1	13.5	45.6	36.6	56.0	46.0	10.4	9.4	N	
1.40579	31.6	20.3	13.5	45.1	33.8	56.0	46.0	10.9	12.2	N	
4.24179	30.7	13.0	13.7	44.4	26.7	56.0	46.0	11.6	19.3	N	
0.54033	31.2	27.8	13.3	44.5	41.1	56.0	46.0	11.5	4.9	L	
0.75725	31.9	25.9	13.4	45.3	39.3	56.0	46.0	10.7	6.7	L	
0.97531	32.1	23.8	13.4	45.5	37.2	56.0	46.0	10.5	8.8	L	
1.18994	32.0	22.0	13.5	45.5	35.5	56.0	46.0	10.5	10.5	L	
1.40784	31.6	20.2	13.5	45.1	33.7	56.0	46.0	10.9	12.3	L	
4.24122	30.4	12.6	13.7	44.1	26.3	56.0	46.0	11.9	19.7	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C. F [dB] (LISN+CABLE+ATTEN.)
Except for the above table : adequate margin data below the limits.

Conducted Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10017505H
Date	06/09/2013
Temperature/ Humidity	23deg. C / 54% RH
Engineer	Takumi Shimada
Mode	Tx DH5



Conducted Emission

DATA OF CONDUCTED EMISSION TEST

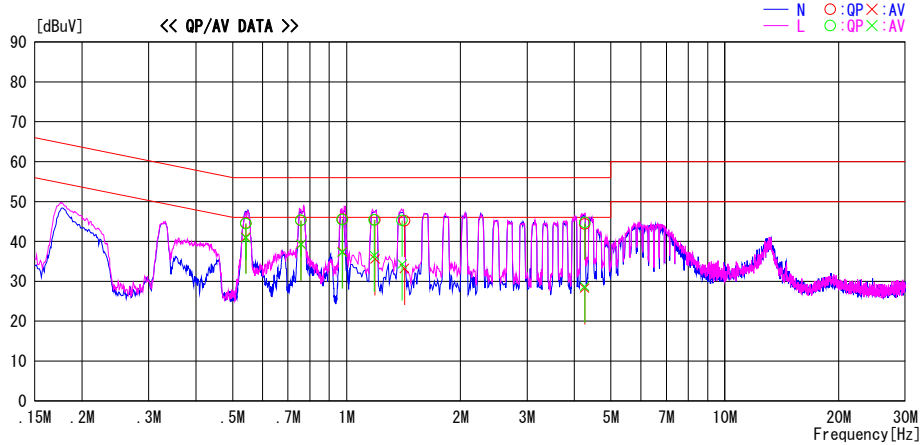
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2013/06/09

Report No. : 10017505H

Temp./Humi. : 23deg. C / 54% RH
Engineer : Takumi Shimada

Mode / Remarks : BT 3DH5 2480MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

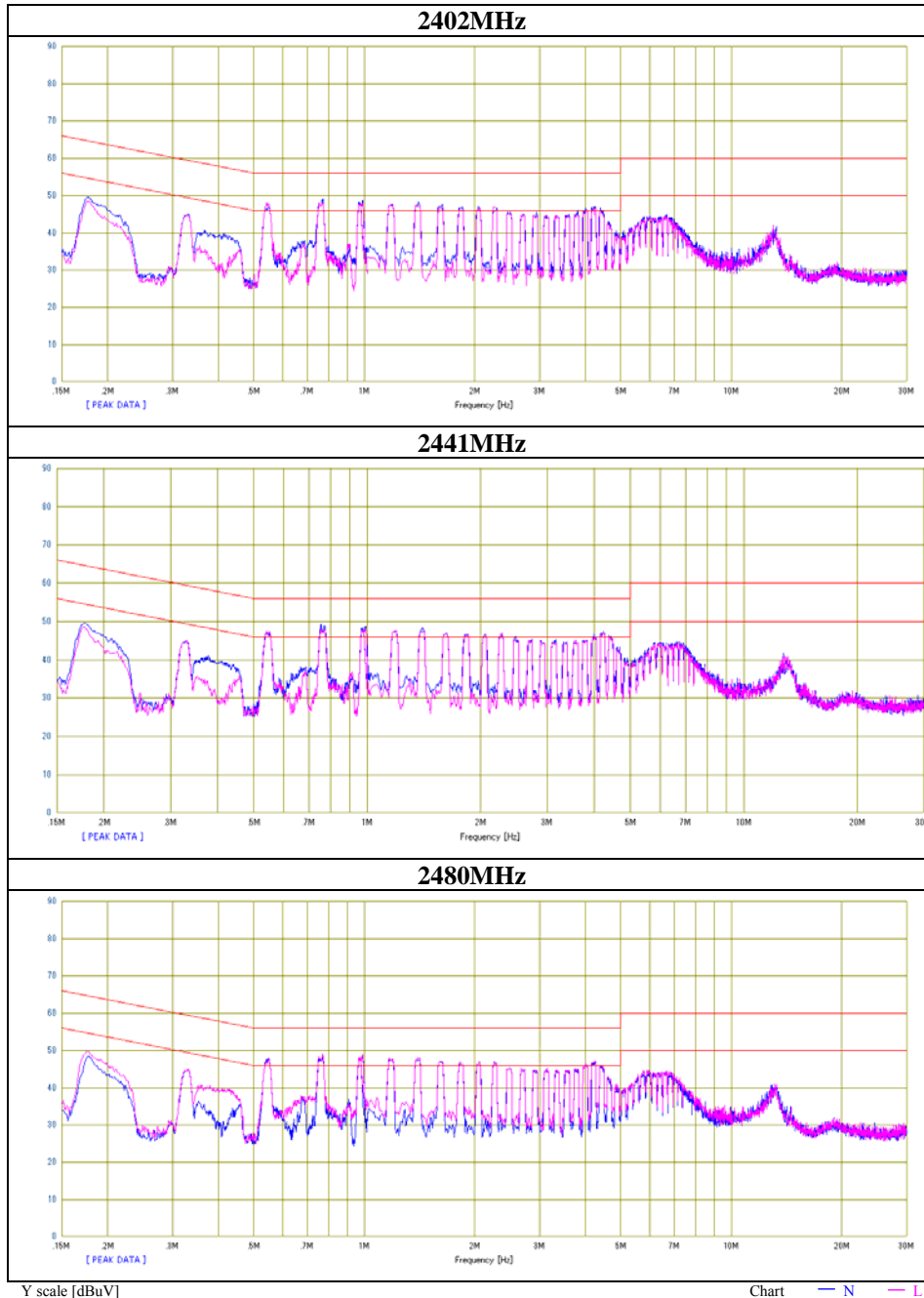


Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.54130	31.3	27.8	13.3	44.6	41.1	56.0	46.0	11.4	4.9	N	
0.75792	31.9	25.9	13.4	45.3	39.3	56.0	46.0	10.7	6.7	N	
0.97624	32.2	24.0	13.4	45.6	37.4	56.0	46.0	10.4	8.6	N	
1.18828	32.0	22.2	13.4	45.4	35.6	56.0	46.0	10.6	10.4	N	
1.42262	31.7	19.7	13.5	45.2	33.2	56.0	46.0	10.8	12.8	N	
4.26101	30.7	14.6	13.7	44.4	28.3	56.0	46.0	11.6	17.7	N	
0.54196	31.2	27.6	13.3	44.5	40.9	56.0	46.0	11.5	5.1	L	
0.75774	31.9	25.9	13.4	45.3	39.3	56.0	46.0	10.7	6.7	L	
0.97382	32.1	23.9	13.4	45.5	37.3	56.0	46.0	10.5	8.7	L	
1.18344	32.0	23.1	13.4	45.4	36.5	56.0	46.0	10.6	9.5	L	
1.40225	31.8	20.8	13.5	45.3	34.3	56.0	46.0	10.7	11.7	L	
4.26123	31.0	15.0	13.7	44.7	28.7	56.0	46.0	11.3	17.3	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN+CABLE+ATTEN.)
Except for the above table : adequate margin data below the limits.

Conducted Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No.	10017505H
Date	06/09/2013
Temperature/ Humidity	23deg. C / 54% RH
Engineer	Takumi Shimada
Mode	Tx 3DH5

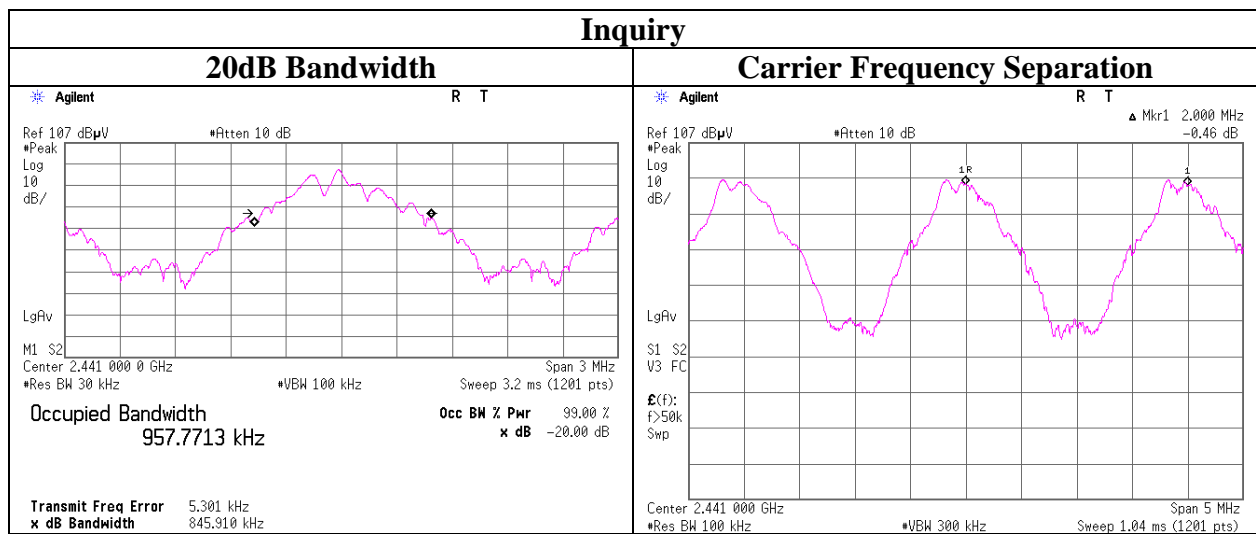


20dB Bandwidth and Carrier Frequency Separation

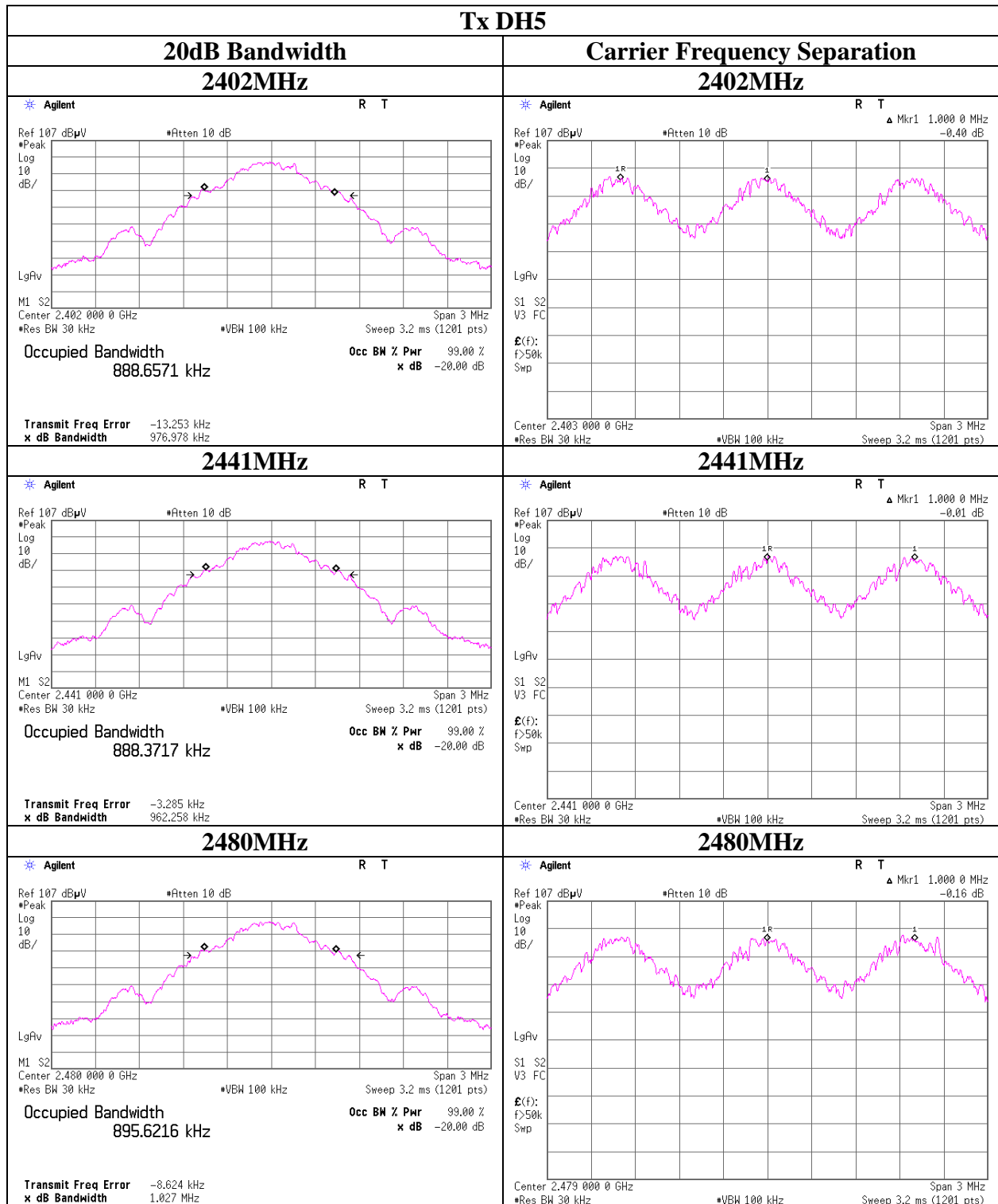
Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	10017505H
Date	06/06/2013
Temperature/ Humidity	25 deg. C / 57% RH
Engineer	Takumi Shimada
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.977	1.000	≥ 0.651
DH5	2441.0	0.962	1.000	≥ 0.642
DH5	2480.0	1.027	1.000	≥ 0.685
3DH5	2402.0	1.312	1.000	≥ 0.875
3DH5	2441.0	1.311	1.000	≥ 0.874
3DH5	2480.0	1.320	1.000	≥ 0.880
Inquiry	2441.0	0.846	2.000	≥ 0.564

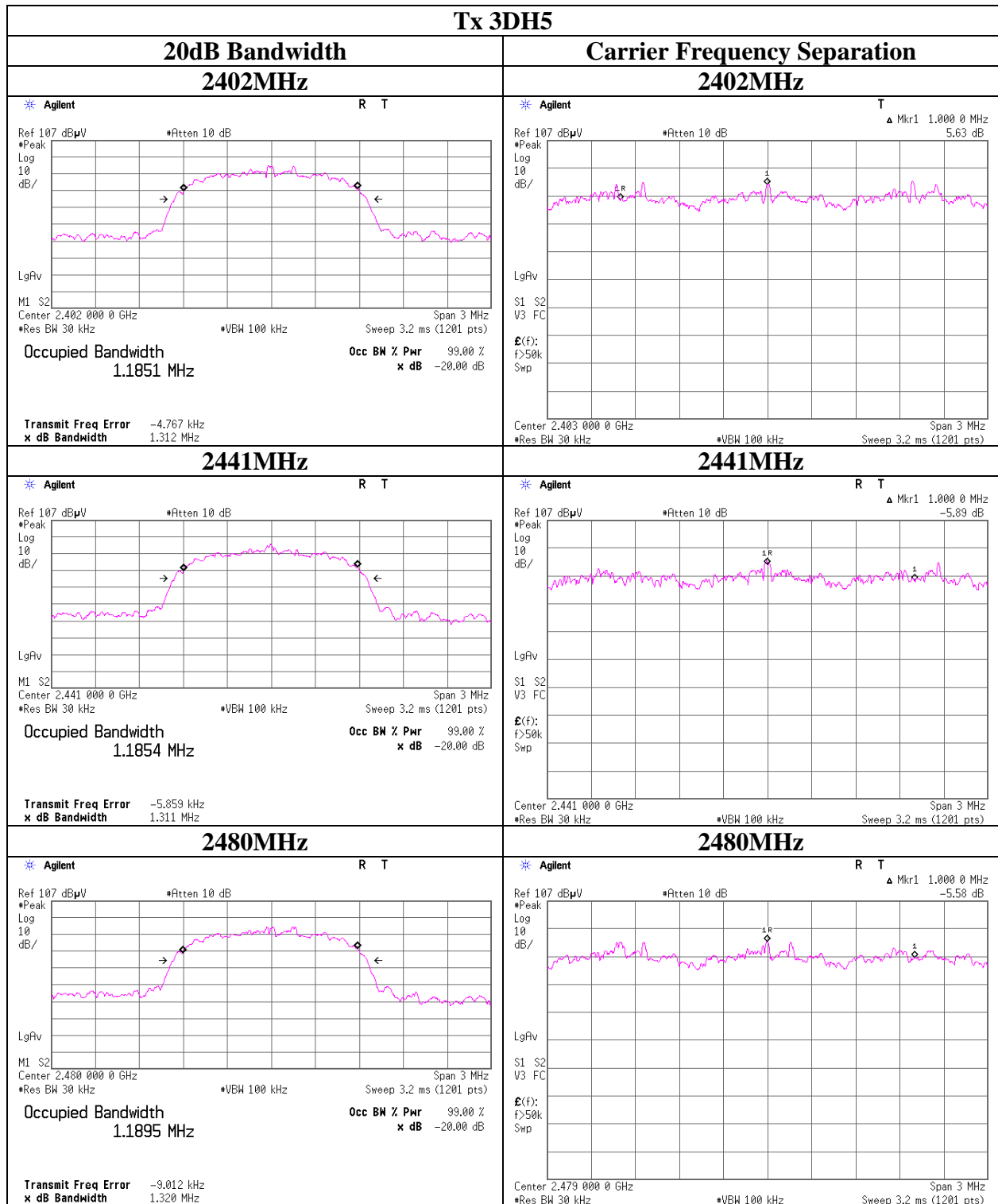
Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).
 No limit applies to 20dB Bandwidth.



20dB Bandwidth and Carrier Frequency Separation



20dB Bandwidth and Carrier Frequency Separation

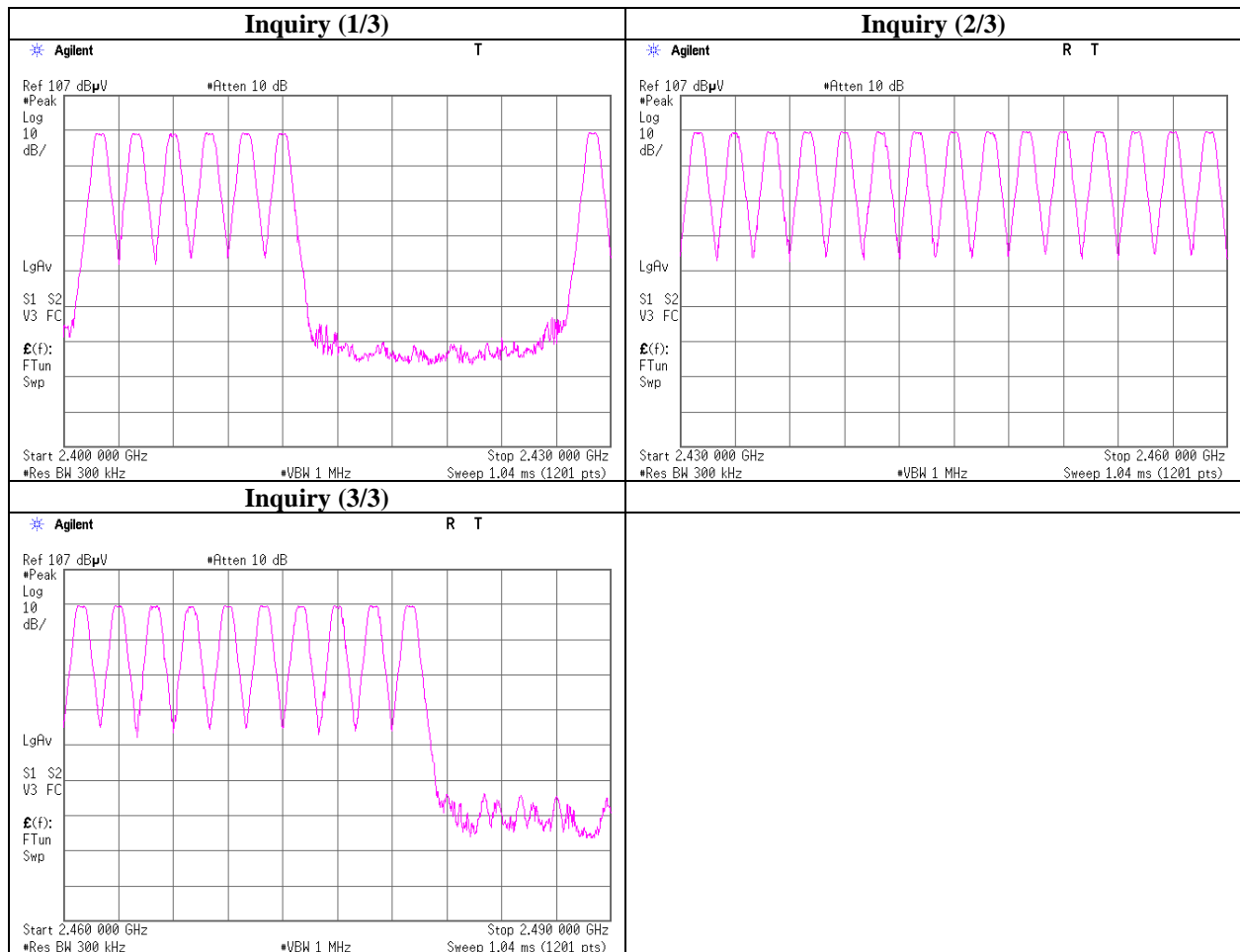


Number of Hopping Frequency

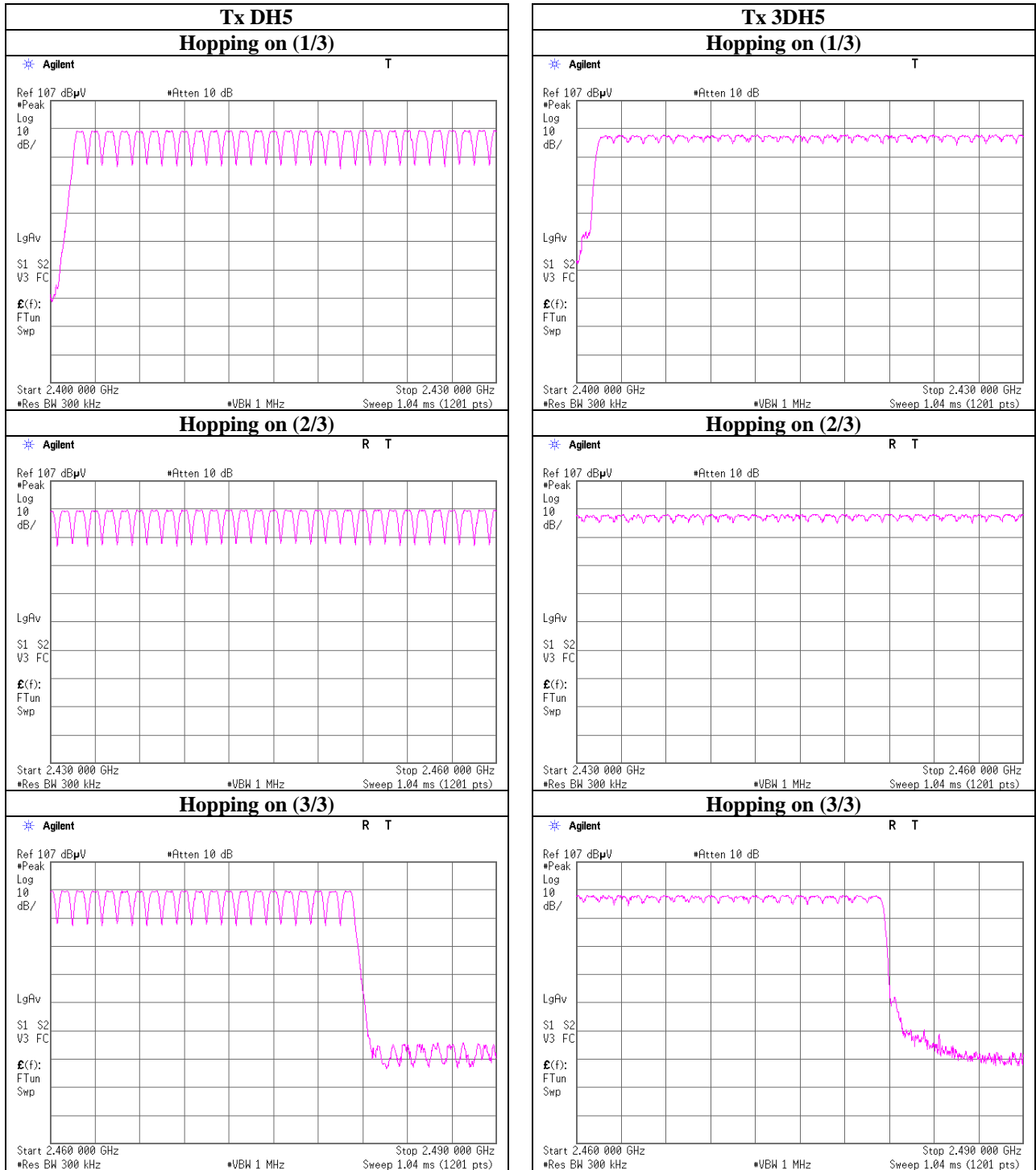
Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	10017505H
Date	06/06/2013
Temperature/ Humidity	25 deg. C / 57% RH
Engineer	Takumi Shimada
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

Mode	Number of channel [times]	Limit [times]
DH5	79	>= 15
3DH5	79	>= 15
Inquiry	32	>= 15

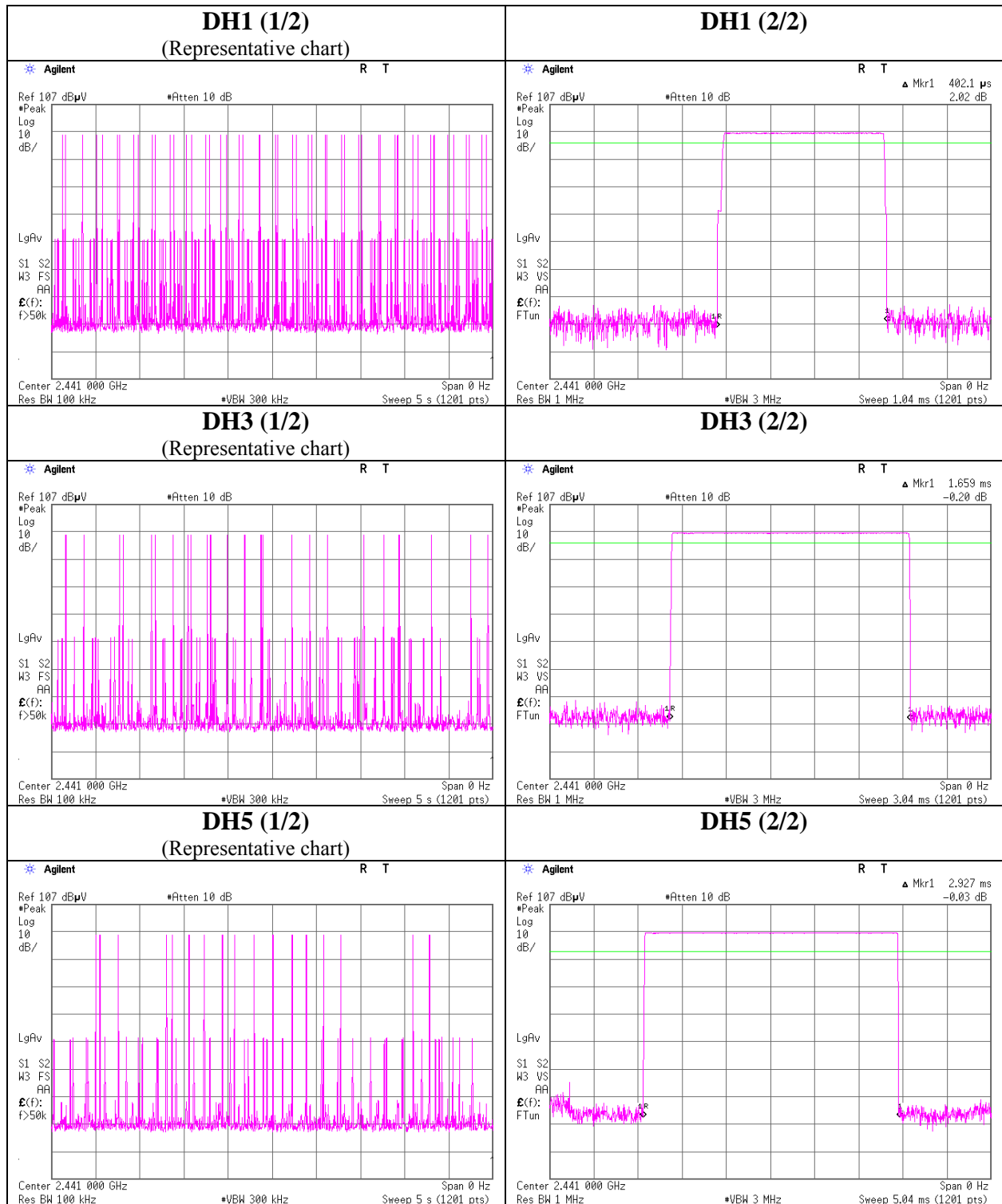
Test was not performed at AFH mode whose number of hopping channel is 20 channels because this Bluetooth radio is in compliance of Bluetooth Specification.



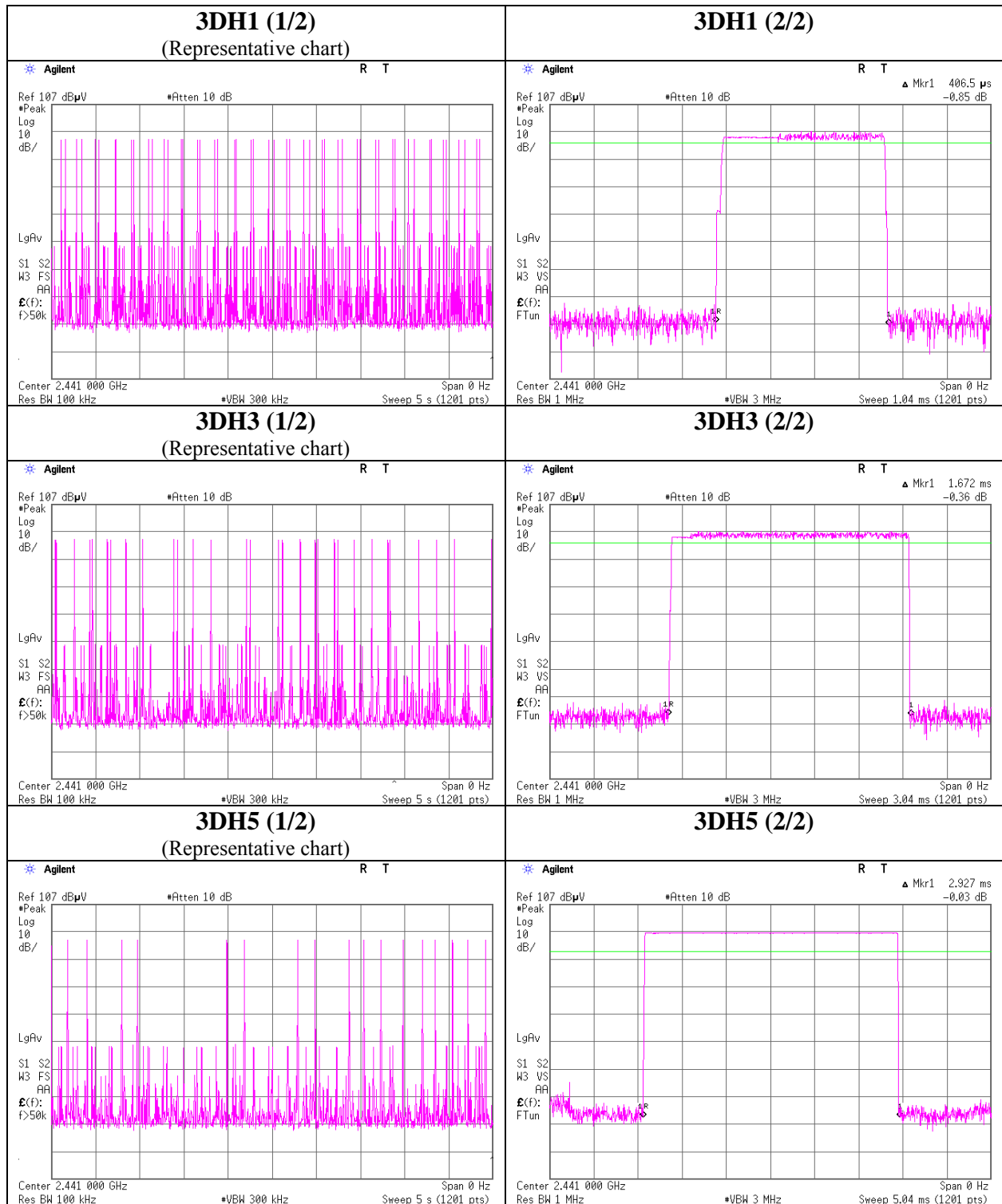
Number of Hopping Frequency



Dwell time



Dwell time



Maximum Peak Output Power

Test place Head Office EMC Lab. No.6 Measurement Room
Report No. 10017505H
Date 06/05/2013
Temperature/ Humidity 25 deg. C / 53% RH
Engineer Takumi Shimada
Mode Tx (Hopping off) DH5/3DH5/Inquiry

Mode	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
DH5	2402.0	-10.67	2.07	10.01	1.41	1.38	20.96	125	19.55
DH5	2441.0	-10.21	2.09	10.01	1.89	1.55	20.96	125	19.07
DH5	2480.0	-10.15	2.09	10.01	1.95	1.57	20.96	125	19.01
3DH5	2402.0	-9.64	2.07	10.01	2.44	1.75	20.96	125	18.52
3DH5	2441.0	-9.18	2.09	10.01	2.92	1.96	20.96	125	18.04
3DH5	2480.0	-9.10	2.09	10.01	3.00	2.00	20.96	125	17.96
Inquiry	2441.0	-9.93	2.09	10.01	2.17	1.65	20.96	125	18.79

Sample Calculation:

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

Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT.

As this device had AFH mode and frequency separation could not meet the requirement of over 20dB BW without 2/3 relaxation, 125mW power limit was applied to it.

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Radiated Spurious Emission

Test place Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No. 10017505H
Date 06/12/2013
Temperature/ Humidity 23 deg. C / 63% RH 23 deg. C / 63% RH
Engineer Takayuki Shimada Takumi Shimada
(1-26.5GHz) (30-1000MHz)
Mode Tx, DH5 2402MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	45.214	QP	29.0	12.2	7.3	32.1	16.4	40.0	23.6	
Hori	101.874	QP	47.4	10.4	8.1	32.1	33.8	43.5	9.7	
Hori	148.502	QP	40.2	14.9	8.6	32.1	31.6	43.5	11.9	
Hori	718.773	QP	36.7	20.6	12.4	32.0	37.7	46.0	8.3	
Hori	742.516	QP	38.1	21.0	12.6	31.9	39.8	46.0	6.2	
Hori	890.987	QP	32.3	22.1	13.3	31.0	36.7	46.0	9.3	
Hori	2390.000	PK	45.4	28.2	2.3	32.4	43.5	73.9	30.4	
Hori	4804.000	PK	41.3	30.5	4.8	31.4	45.2	73.9	28.7	
Hori	9608.000	PK	42.7	39.0	6.4	33.0	55.1	73.9	18.8	
Hori	2390.000	AV	32.9	28.2	2.3	32.4	31.0	53.9	22.9	
Hori	4804.000	AV	29.1	30.5	4.8	31.4	33.0	53.9	20.9	
Hori	9608.000	AV	30.5	39.0	6.4	33.0	42.9	53.9	11.0	
Vert	41.624	QP	39.3	13.8	7.2	32.2	28.1	40.0	11.9	
Vert	104.341	QP	46.0	10.7	8.1	32.1	32.7	43.5	10.8	
Vert	148.503	QP	42.4	14.9	8.6	32.1	33.8	43.5	9.7	
Vert	718.772	QP	32.9	20.6	12.4	32.0	33.9	46.0	12.1	
Vert	742.503	QP	35.4	21.0	12.6	31.9	37.1	46.0	8.9	
Vert	890.989	QP	31.1	22.1	13.3	31.0	35.5	46.0	10.5	
Vert	2390.000	PK	56.1	28.2	2.3	32.4	54.2	73.9	19.7	
Vert	4804.000	PK	41.2	30.5	4.8	31.4	45.1	73.9	28.8	
Vert	9608.000	PK	42.4	39.0	6.4	33.0	54.8	73.9	19.1	
Vert	2390.000	AV	34.4	28.2	2.3	32.4	32.5	53.9	21.4	
Vert	4804.000	AV	29.1	30.5	4.8	31.4	33.0	53.9	20.9	
Vert	9608.000	AV	30.5	39.0	6.4	33.0	42.9	53.9	11.0	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

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

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	2402.000	PK	99.3	28.2	2.3	32.4	97.4	-	-	Carrier
Hori	2400.000	PK	41.5	28.2	2.3	32.4	39.6	77.4	37.8	
Hori	7206.000	PK	40.2	35.8	5.6	32.3	49.3	77.4	28.1	
Vert	2402.000	PK	97.9	28.2	2.3	32.4	96.0	-	-	Carrier
Vert	2400.000	PK	41.8	28.2	2.3	32.4	39.9	76.0	36.1	
Vert	7206.000	PK	39.9	35.8	5.6	32.3	49.0	76.0	27.0	

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

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Radiated Spurious Emission

Test place Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No. 10017505H
Date 06/12/2013 06/12/2013
Temperature/ Humidity 23 deg.C / 63% RH 23 deg. C / 63% RH
Engineer Takayuki Shimada Takumi Shimada
(1-26.5GHz) (30-1000MHz)
Mode Tx, 3DH5 2402MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	45.311	QP	28.4	12.1	7.3	32.1	15.7	40.0	24.3	
Hori	101.747	QP	46.8	10.3	8.1	32.1	33.1	43.5	10.4	
Hori	148.501	QP	39.5	14.9	8.6	32.1	30.9	43.5	12.6	
Hori	718.763	QP	37.1	20.6	12.4	32.0	38.1	46.0	7.9	
Hori	742.471	QP	37.2	21.0	12.6	31.9	38.9	46.0	7.1	
Hori	890.970	QP	31.4	22.1	13.3	31.0	35.8	46.0	10.2	
Hori	2390.000	PK	50.7	28.2	2.3	32.4	48.8	73.9	25.1	
Hori	4804.000	PK	41.0	30.5	4.8	31.4	44.9	73.9	29.0	
Hori	9608.000	PK	42.9	39.0	6.4	33.0	55.3	73.9	18.6	
Hori	2390.000	AV	32.9	28.2	2.3	32.4	31.0	53.9	22.9	
Hori	4804.000	AV	29.1	30.5	4.8	31.4	33.0	53.9	20.9	
Hori	9608.000	AV	30.5	39.0	6.4	33.0	42.9	53.9	11.0	
Vert	41.524	QP	39.4	13.9	7.2	32.2	28.3	40.0	11.7	
Vert	104.353	QP	45.9	10.7	8.1	32.1	32.6	43.5	10.9	
Vert	148.503	QP	42.3	14.9	8.6	32.1	33.7	43.5	9.8	
Vert	718.762	QP	32.5	20.6	12.4	32.0	33.5	46.0	12.5	
Vert	742.475	QP	35.9	21.0	12.6	31.9	37.6	46.0	8.4	
Vert	890.972	QP	32.2	22.1	13.3	31.0	36.6	46.0	9.4	
Vert	2390.000	PK	51.5	28.2	2.3	32.4	49.6	73.9	24.3	
Vert	4804.000	PK	41.2	30.5	4.8	31.4	45.1	73.9	28.8	
Vert	9608.000	PK	42.4	39.0	6.4	33.0	54.8	73.9	19.1	
Vert	2390.000	AV	34.6	28.2	2.3	32.4	32.7	53.9	21.2	
Vert	4804.000	AV	29.1	30.5	4.8	31.4	33.0	53.9	20.9	
Vert	9608.000	AV	30.5	39.0	6.4	33.0	42.9	53.9	11.0	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

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

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	2402.000	PK	101.1	28.2	2.3	32.4	99.2	-	-	Carrier
Hori	2400.000	PK	52.3	28.2	2.3	32.4	50.4	79.2	28.8	
Hori	7206.000	PK	39.3	35.8	5.6	32.3	48.4	79.2	30.8	
Vert	2402.000	PK	99.5	28.2	2.3	32.4	97.6	-	-	Carrier
Vert	2400.000	PK	51.1	28.2	2.3	32.4	49.2	77.6	28.4	
Vert	7206.000	PK	40.8	35.8	5.6	32.3	49.9	77.6	27.7	

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

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Facsimile : +81 596 24 8124

Radiated Spurious Emission

Test place Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No. 10017505H
Date 06/12/2013 06/12/2013
Temperature/ Humidity 23 deg. C / 63% RH 23 deg. C / 63% RH
Engineer Takayuki Shimada Takumi Shimada
(1-26.5GHz) (30-1000MHz)
Mode Tx, 3DH5 2441MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	45.323	QP	28.7	12.1	7.3	32.1	16.0	40.0	24.0	
Hori	101.744	QP	46.6	10.3	8.1	32.1	32.9	43.5	10.6	
Hori	148.501	QP	39.4	14.9	8.6	32.1	30.8	43.5	12.7	
Hori	718.764	QP	36.8	20.6	12.4	32.0	37.8	46.0	8.2	
Hori	742.472	QP	37.1	21.0	12.6	31.9	38.8	46.0	7.2	
Hori	890.971	QP	31.6	22.1	13.3	31.0	36.0	46.0	10.0	
Hori	4882.000	PK	41.5	30.6	4.7	31.4	45.4	73.9	28.5	
Hori	7323.000	PK	47.1	36.0	5.6	32.4	56.3	73.9	17.6	
Hori	9764.000	PK	42.4	39.4	6.4	33.0	55.2	73.9	18.7	
Hori	4882.000	AV	29.3	30.6	4.7	31.4	33.2	53.9	20.7	
Hori	7323.000	AV	35.2	36.0	5.6	32.4	44.4	53.9	9.5	
Hori	9764.000	AV	30.4	39.4	6.4	33.0	43.2	53.9	10.7	
Vert	41.531	QP	39.9	13.8	7.2	32.2	28.7	40.0	11.3	
Vert	104.358	QP	45.4	10.8	8.1	32.1	32.2	43.5	11.3	
Vert	148.502	QP	43.1	14.9	8.6	32.1	34.5	43.5	9.0	
Vert	718.761	QP	32.7	20.6	12.4	32.0	33.7	46.0	12.3	
Vert	742.475	QP	36.0	21.0	12.6	31.9	37.7	46.0	8.3	
Vert	890.972	QP	31.9	22.1	13.3	31.0	36.3	46.0	9.7	
Vert	4882.000	PK	41.6	30.6	4.7	31.4	45.5	73.9	28.4	
Vert	7323.000	PK	46.0	36.0	5.6	32.4	55.2	73.9	18.7	
Vert	9764.000	PK	42.5	39.4	6.4	33.0	55.3	73.9	18.6	
Vert	4882.000	AV	29.3	30.6	4.7	31.4	33.2	53.9	20.7	
Vert	7323.000	AV	35.3	36.0	5.6	32.4	44.5	53.9	9.4	
Vert	9764.000	AV	30.4	39.4	6.4	33.0	43.2	53.9	10.7	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

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

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Radiated Spurious Emission

Test place Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No. 10017505H
Date 06/12/2013 06/12/2013
Temperature/ Humidity 23 deg. C / 63% RH 23 deg. C / 63% RH
Engineer Takayuki Shimada Takumi Shimada
(1-26.5GHz) (30-1000MHz)
Mode Tx, 3DH5 2480MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	45.285	QP	28.5	12.1	7.3	32.1	15.8	40.0	24.2	
Hori	101.739	QP	46.1	10.3	8.1	32.1	32.4	43.5	11.1	
Hori	148.503	QP	39.3	14.9	8.6	32.1	30.7	43.5	12.8	
Hori	718.761	QP	36.7	20.6	12.4	32.0	37.7	46.0	8.3	
Hori	742.471	QP	37.2	21.0	12.6	31.9	38.9	46.0	7.1	
Hori	890.971	QP	31.8	22.1	13.3	31.0	36.2	46.0	9.8	
Hori	2483.500	PK	57.0	28.4	2.3	32.3	55.4	73.9	18.5	
Hori	4960.000	PK	42.2	30.7	4.7	31.4	46.2	73.9	27.7	
Hori	7440.000	PK	46.2	36.2	5.6	32.4	55.6	73.9	18.3	
Hori	9920.000	PK	43.1	39.8	6.4	33.1	56.2	73.9	17.7	
Hori	2483.500	AV	38.7	28.4	2.3	32.3	37.1	53.9	16.8	
Hori	4960.000	AV	29.3	30.7	4.7	31.4	33.3	53.9	20.6	
Hori	7440.000	AV	34.8	36.2	5.6	32.4	44.2	53.9	9.7	
Hori	9920.000	AV	30.9	39.8	6.4	33.1	44.0	53.9	9.9	
Vert	41.547	QP	39.6	13.8	7.2	32.2	28.4	40.0	11.6	
Vert	104.328	QP	45.1	10.7	8.1	32.1	31.8	43.5	11.7	
Vert	148.504	QP	43.2	14.9	8.6	32.1	34.6	43.5	8.9	
Vert	718.763	QP	33.0	20.6	12.4	32.0	34.0	46.0	12.0	
Vert	742.473	QP	35.8	21.0	12.6	31.9	37.5	46.0	8.5	
Vert	890.973	QP	32.2	22.1	13.3	31.0	36.6	46.0	9.4	
Vert	2483.500	PK	56.1	28.4	2.3	32.3	54.5	73.9	19.4	
Vert	4960.000	PK	42.0	30.7	4.7	31.4	46.0	73.9	27.9	
Vert	7440.000	PK	45.1	36.2	5.6	32.4	54.5	73.9	19.4	
Vert	9920.000	PK	43.1	39.8	6.4	33.1	56.2	73.9	17.7	
Vert	2483.500	AV	37.6	28.4	2.3	32.3	36.0	53.9	17.9	
Vert	4960.000	AV	29.3	30.7	4.7	31.4	33.3	53.9	20.6	
Vert	7440.000	AV	34.3	36.2	5.6	32.4	43.7	53.9	10.2	
Vert	9920.000	AV	30.9	39.8	6.4	33.1	44.0	53.9	9.9	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

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

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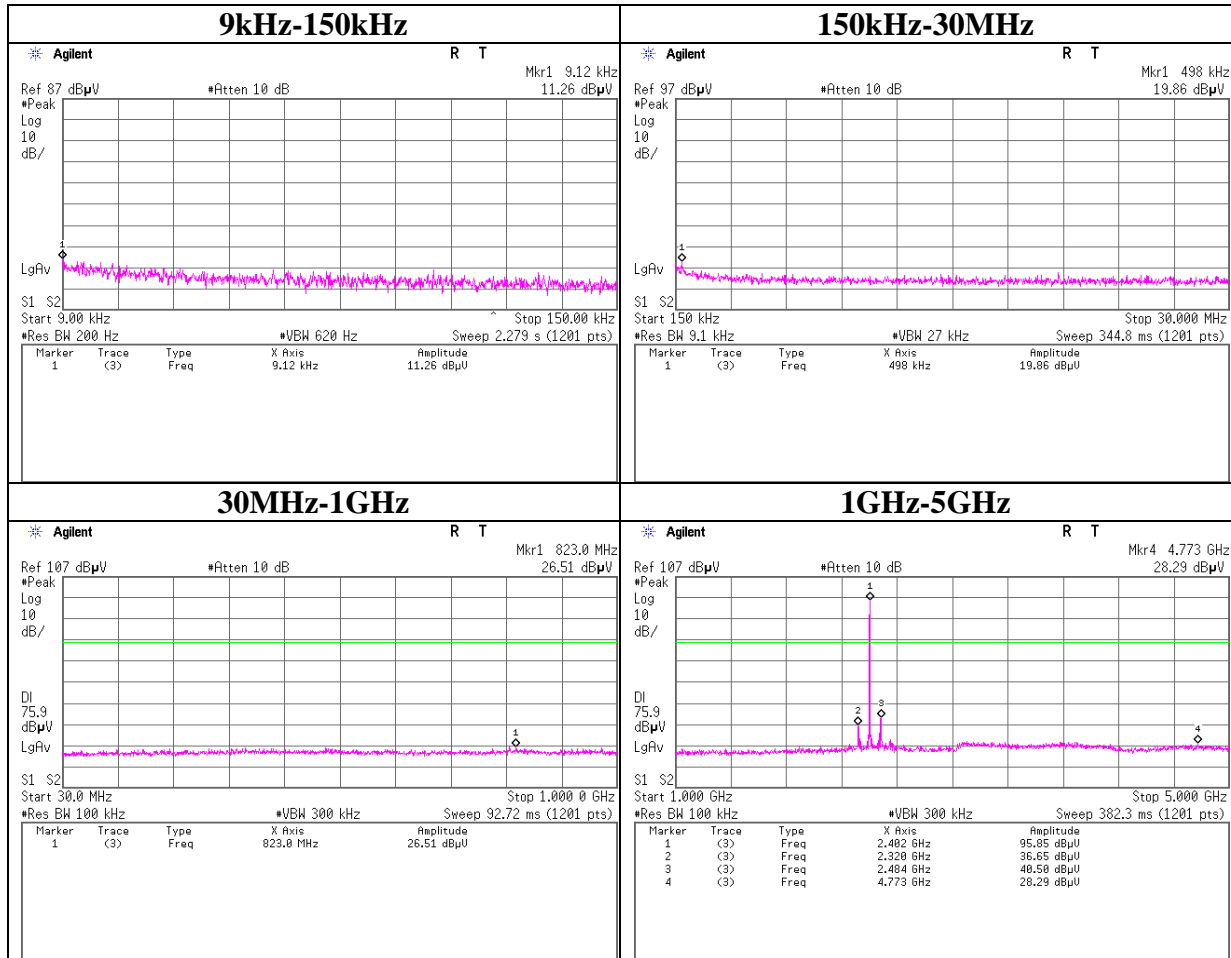
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Conducted Spurious Emission

Tx DH5 2402MHz



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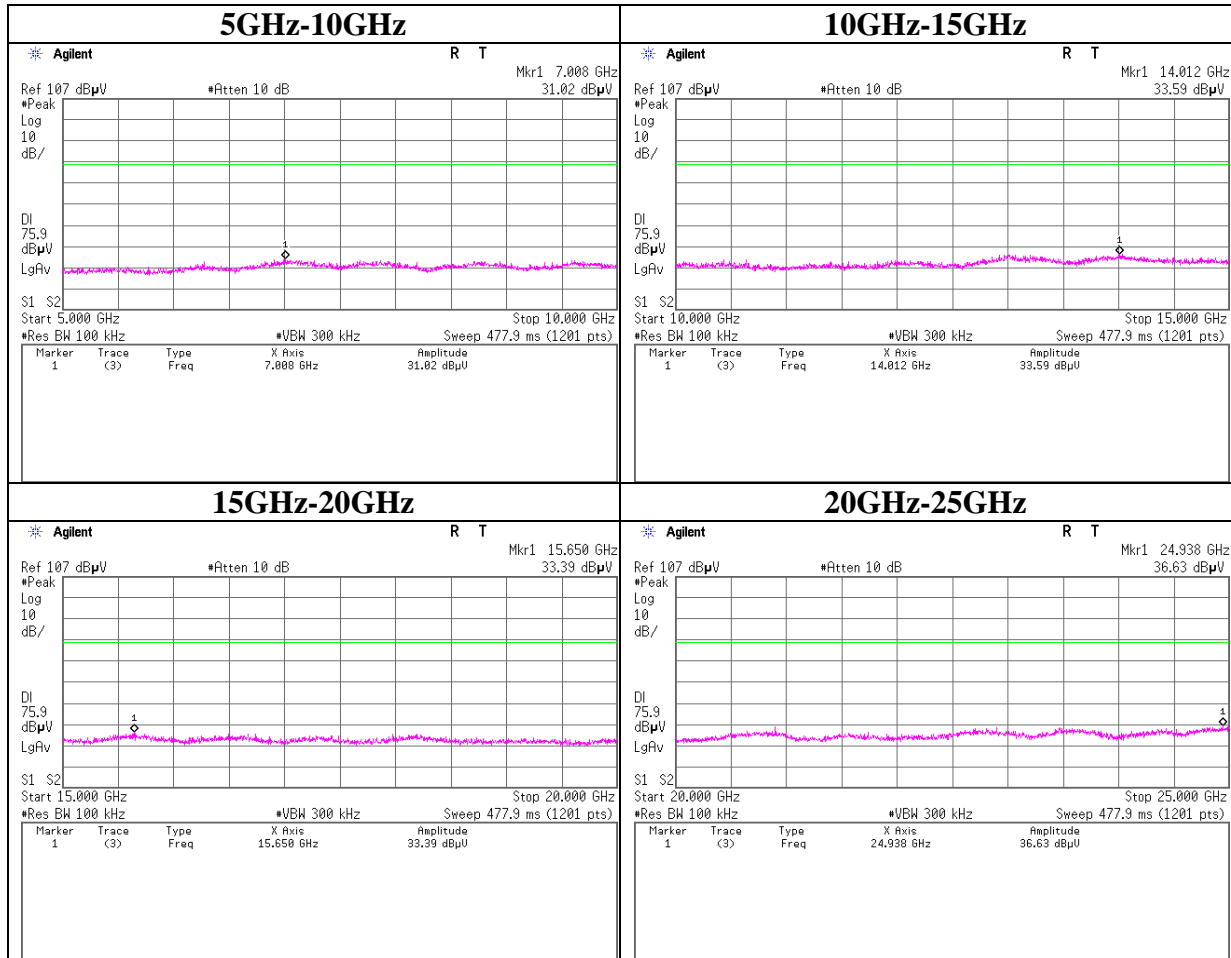
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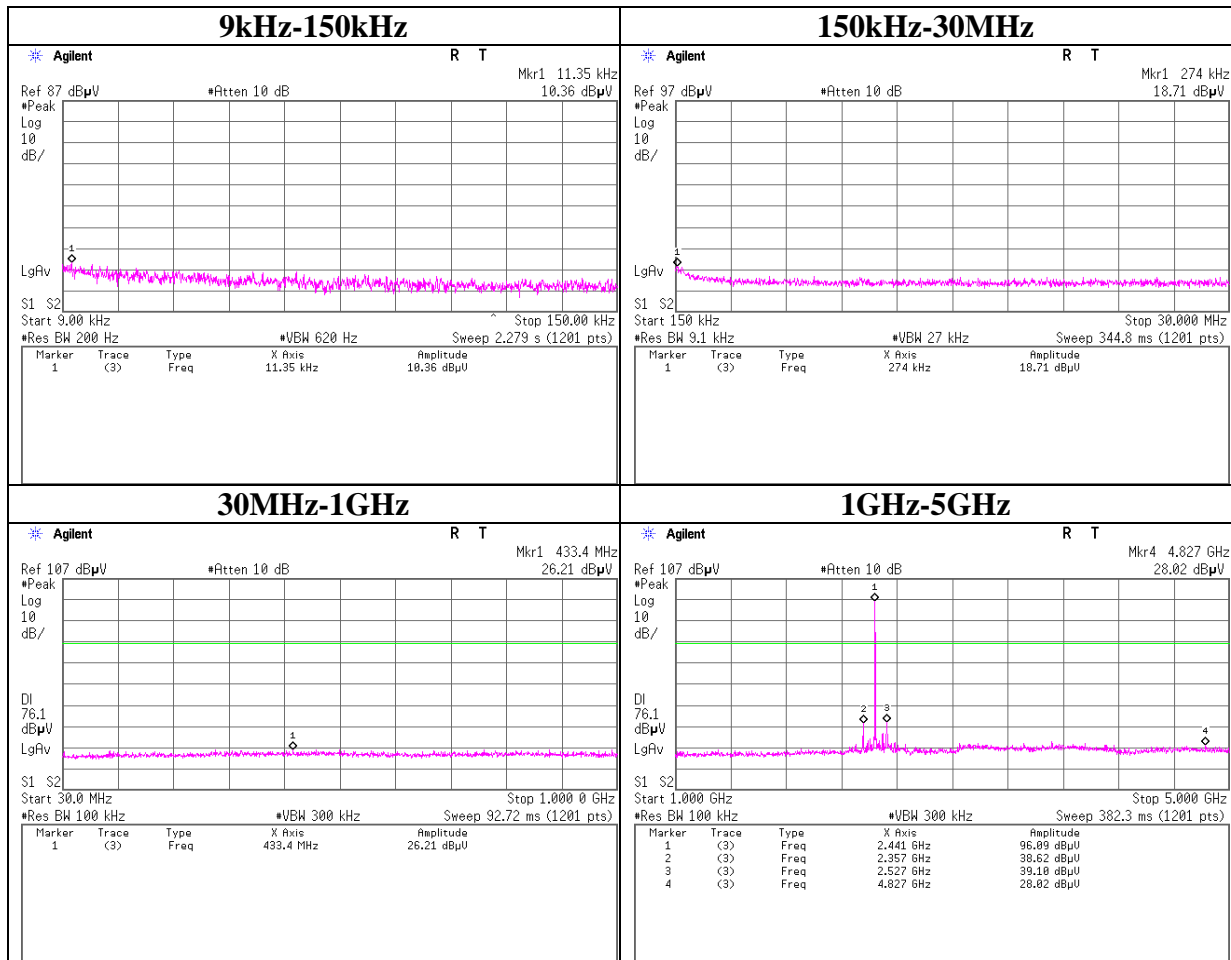
Conducted Spurious Emission

Tx DH5 2402MHz



Conducted Spurious Emission

Tx DH5 2441MHz



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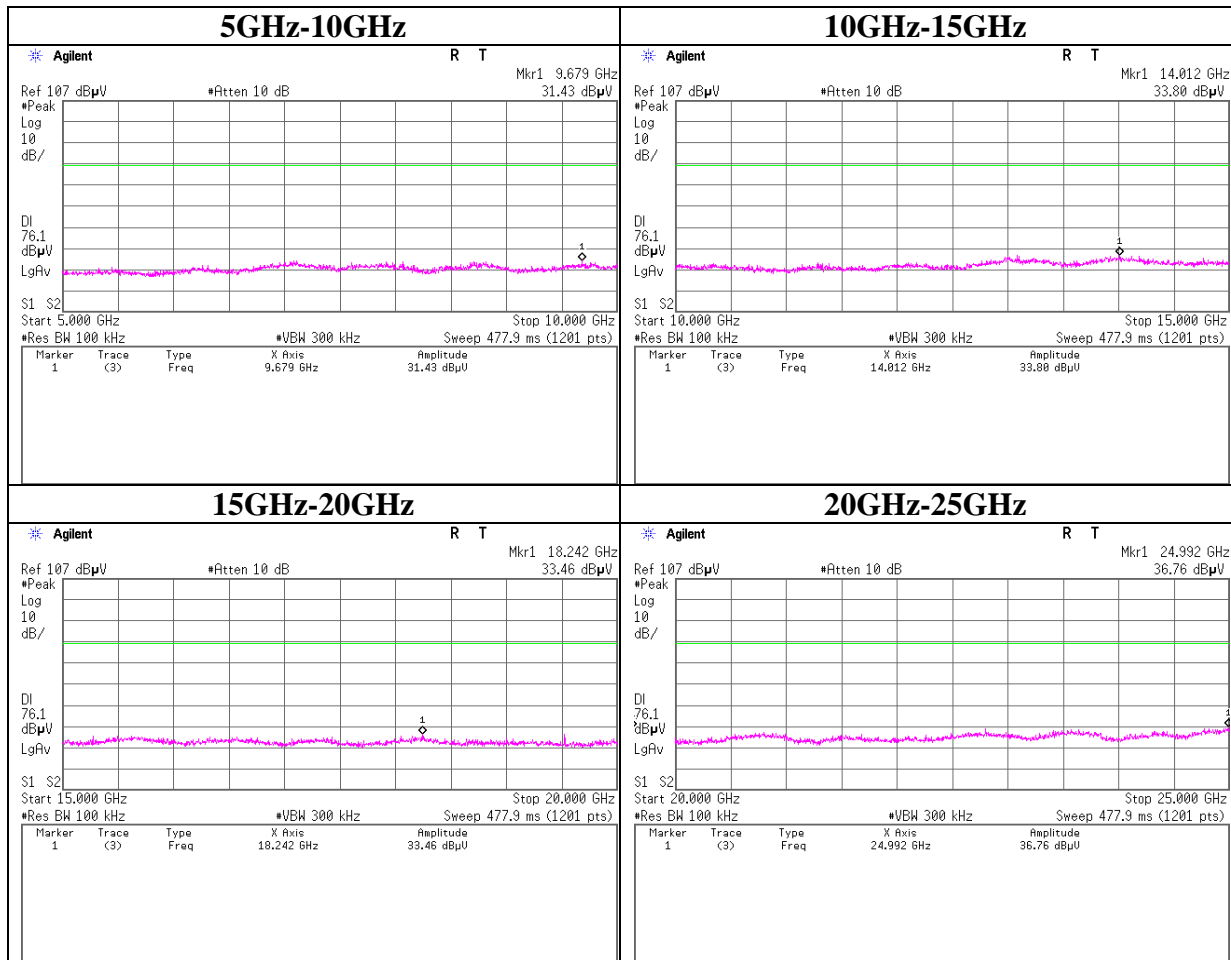
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Conducted Spurious Emission

Tx DH5 2441MHz



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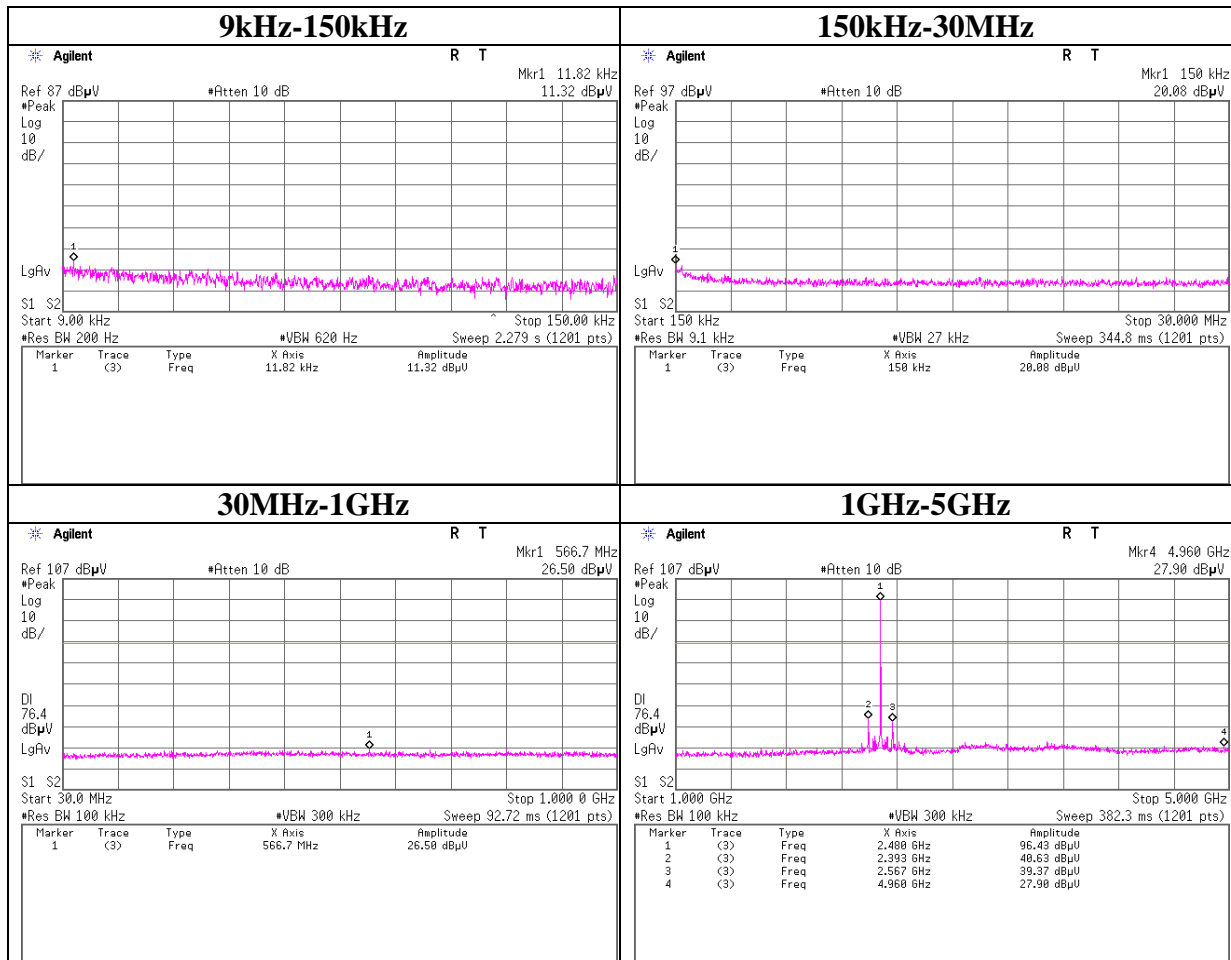
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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Conducted Spurious Emission

Tx DH5 2480MHz



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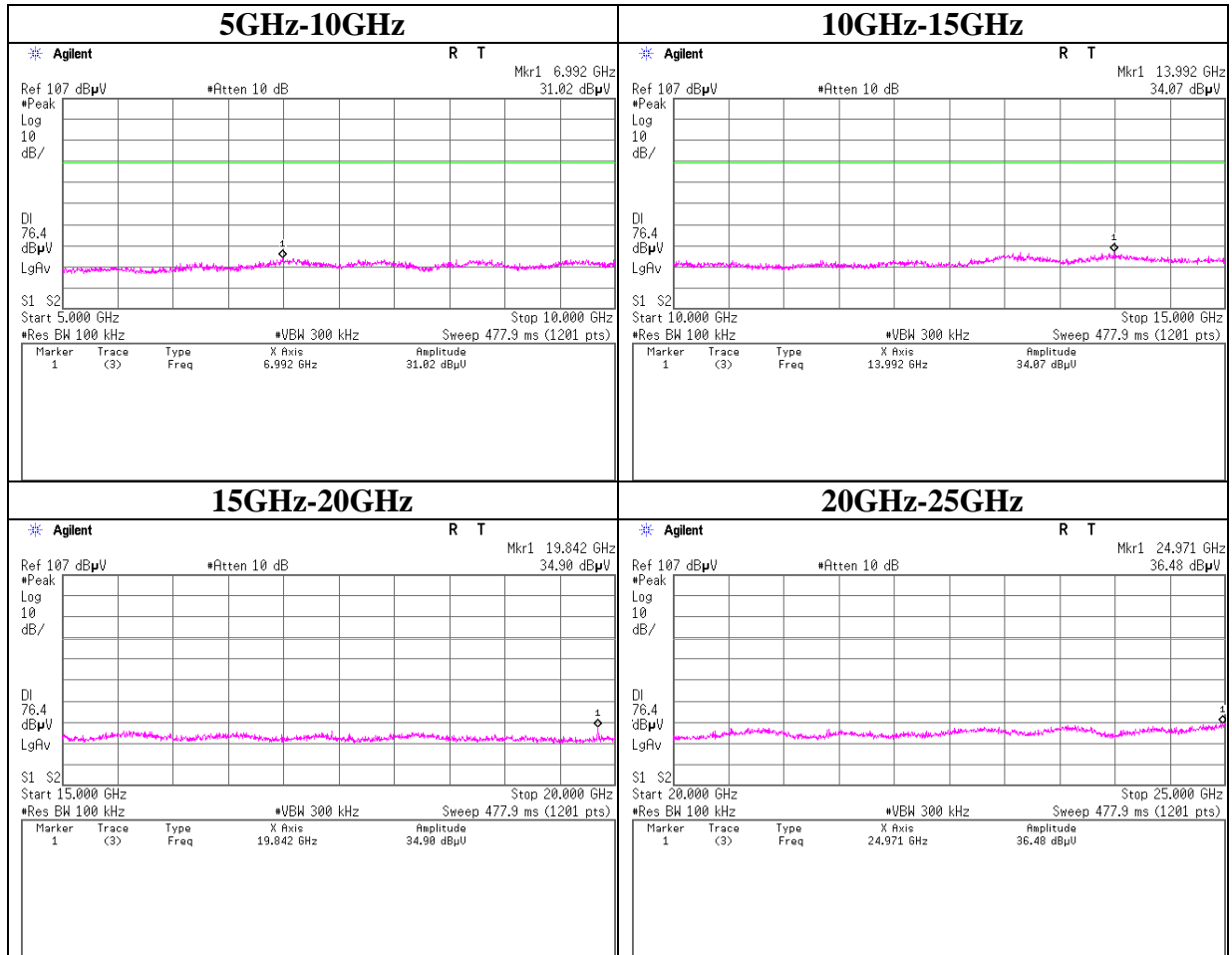
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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Conducted Spurious Emission

Tx DH5 2480MHz



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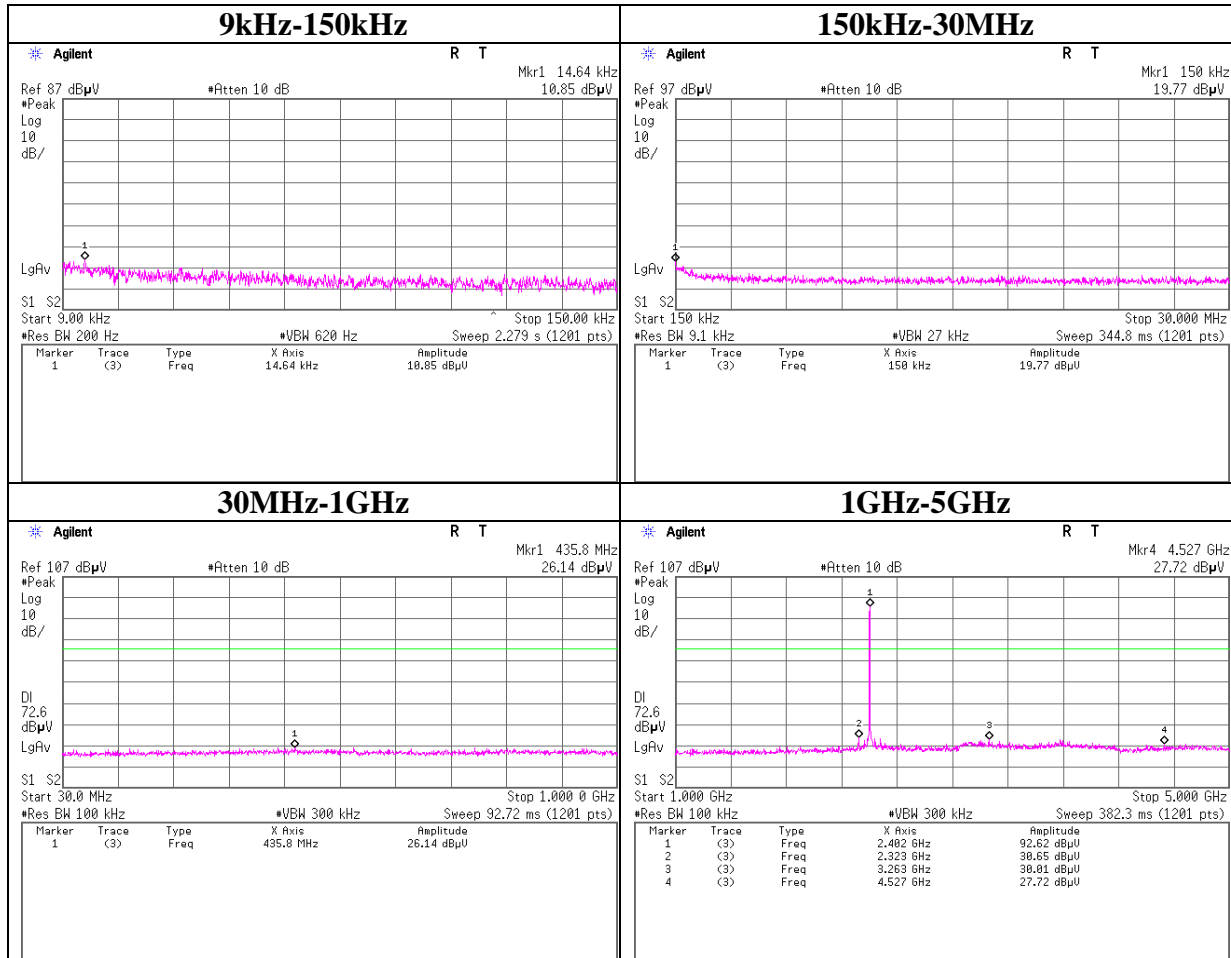
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Facsimile : +81 596 24 8124

Conducted Spurious Emission

Tx 3DH5 2402MHz



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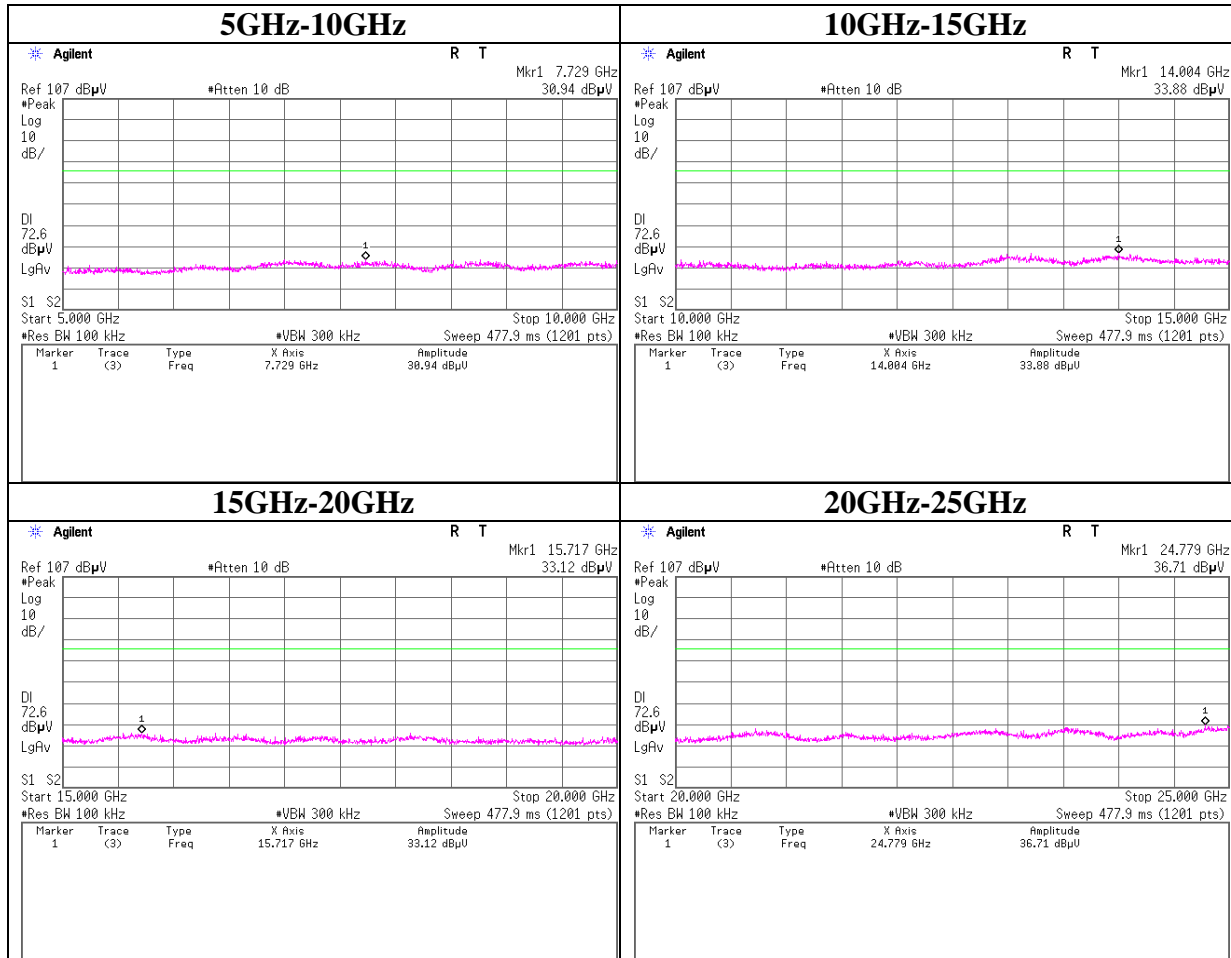
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Conducted Spurious Emission

Tx 3DH5 2402MHz



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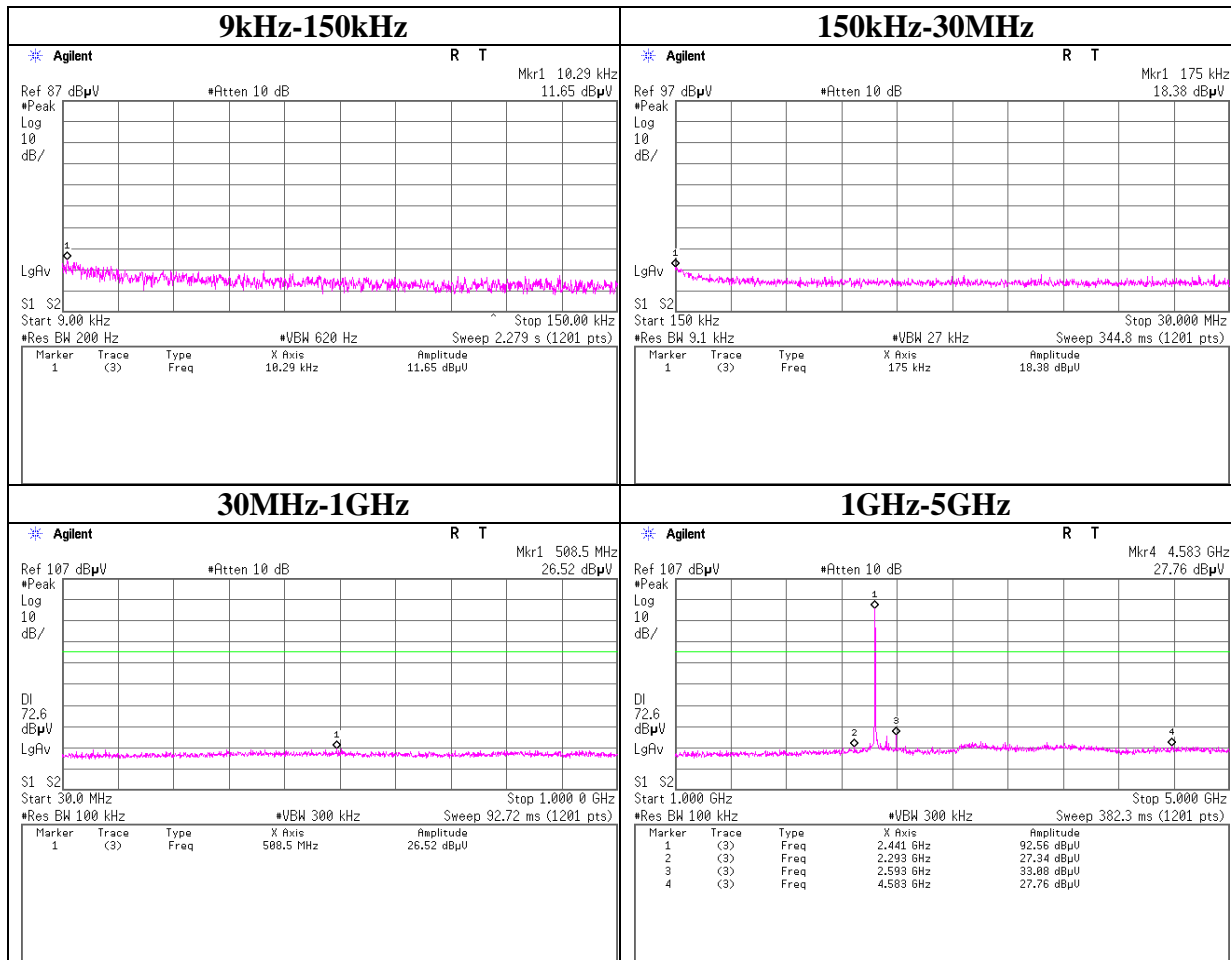
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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Conducted Spurious Emission

Tx 3DH5 2441MHz



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Head Office EMC Lab.

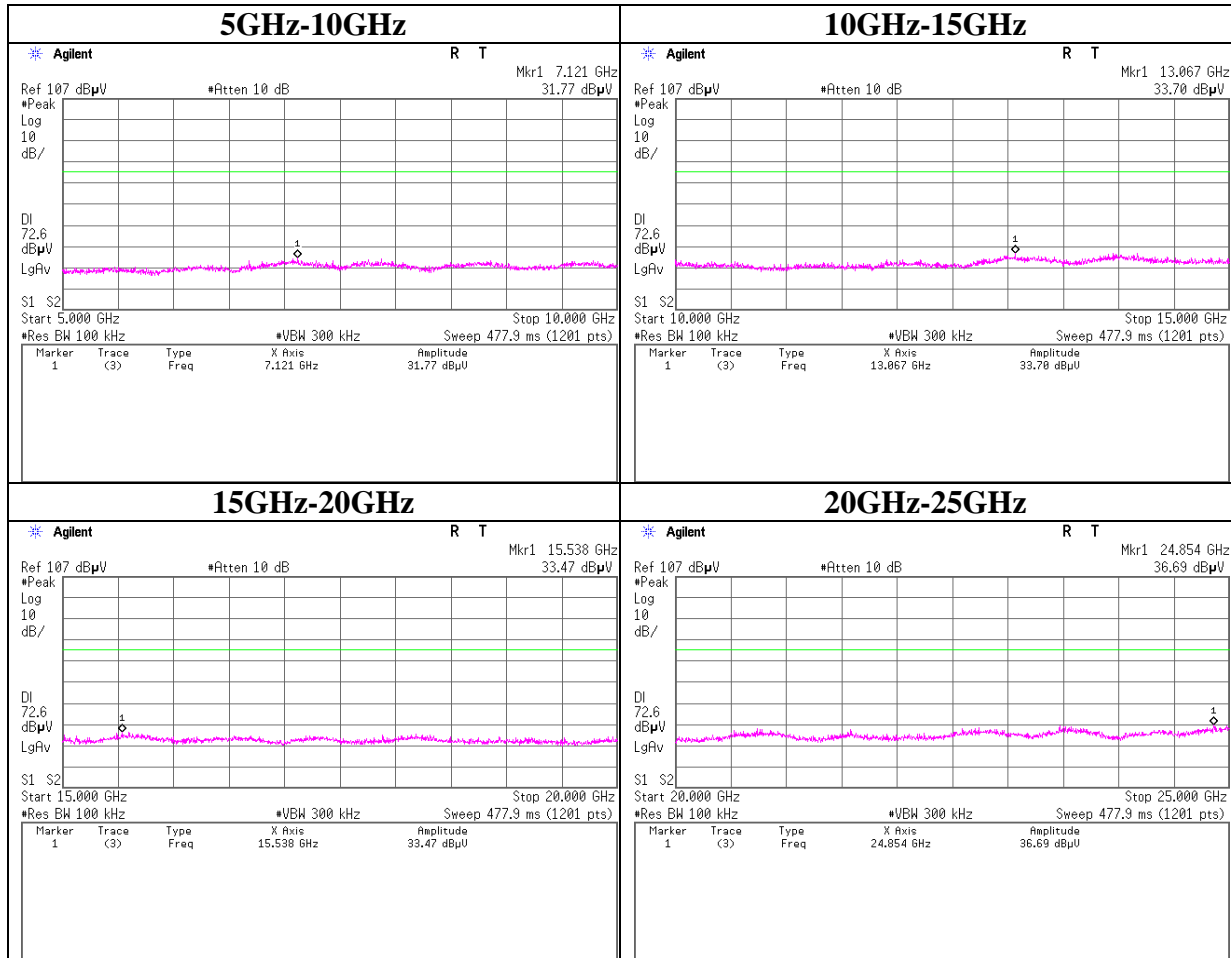
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Conducted Spurious Emission

Tx 3DH5 2441MHz



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Head Office EMC Lab.

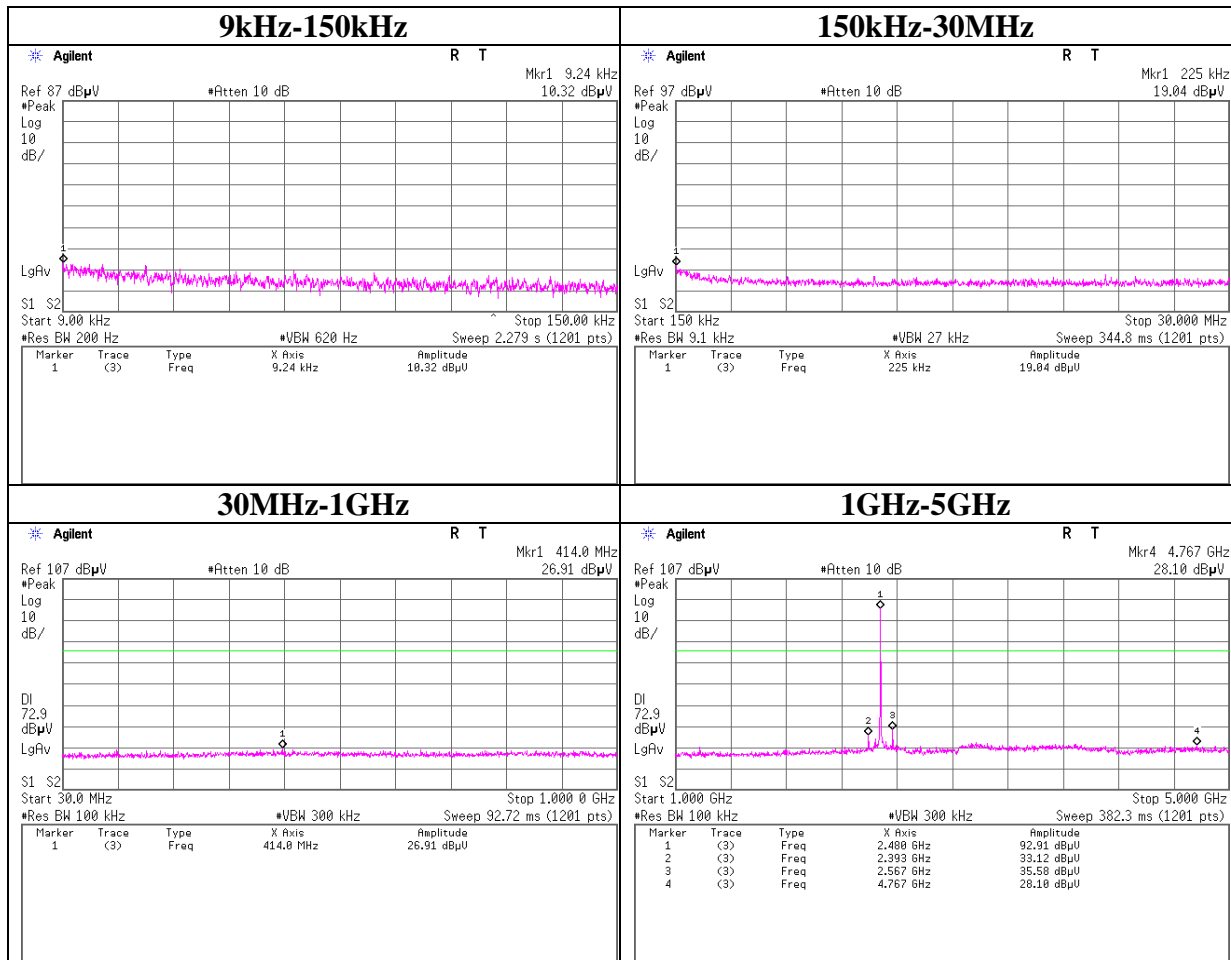
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Conducted Spurious Emission

Tx 3DH5 2480MHz



UL Japan, Inc.

Head Office EMC Lab.

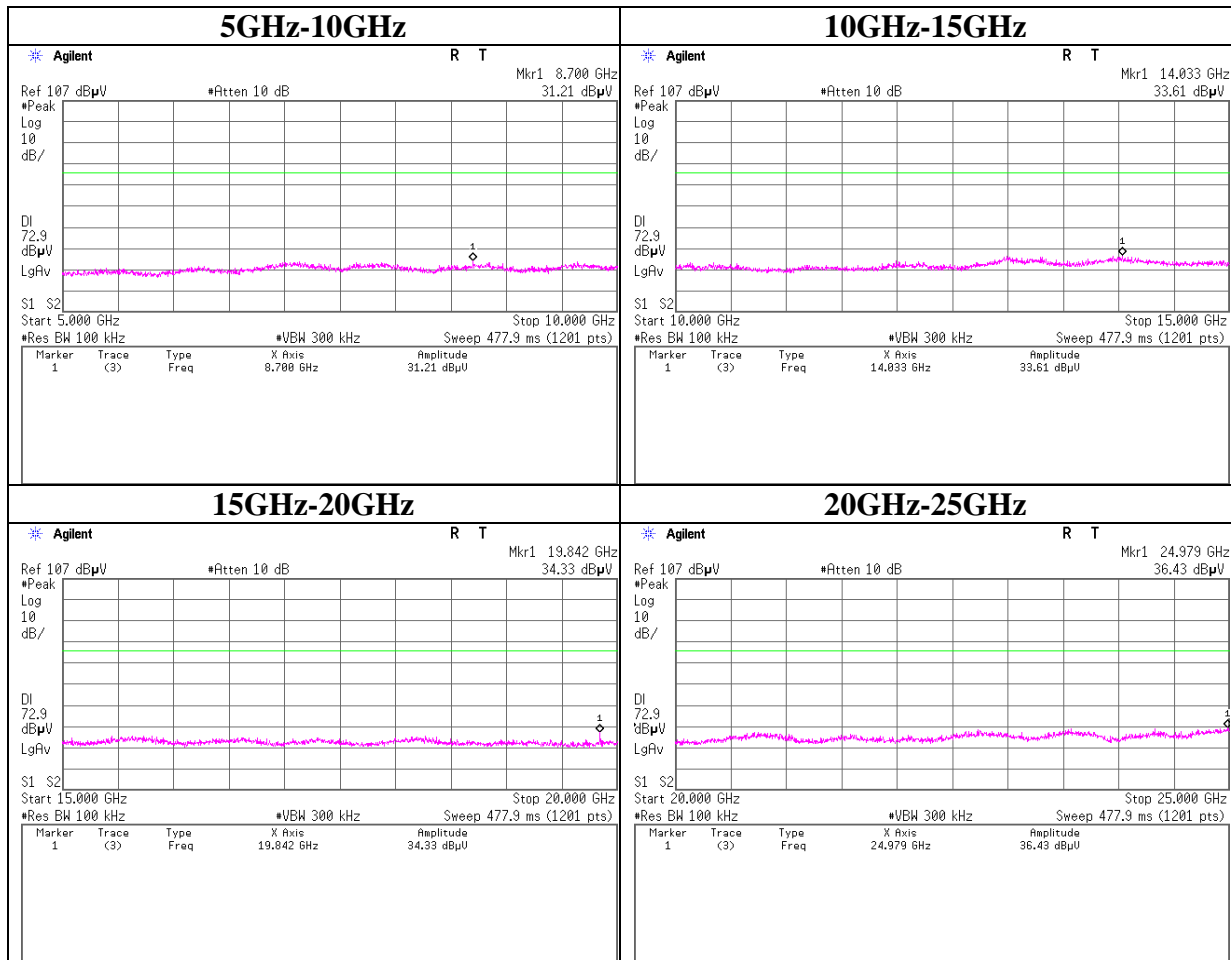
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Telephone : +81 596 24 8999

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Conducted Spurious Emission

Tx 3DH5 2480MHz



UL Japan, Inc.

Head Office EMC Lab.

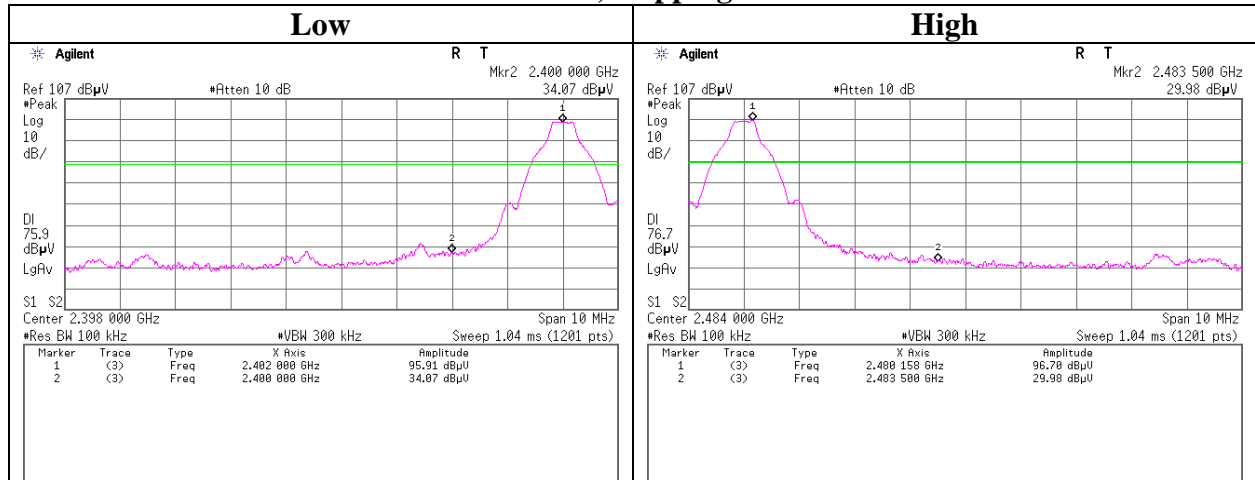
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Telephone : +81 596 24 8999

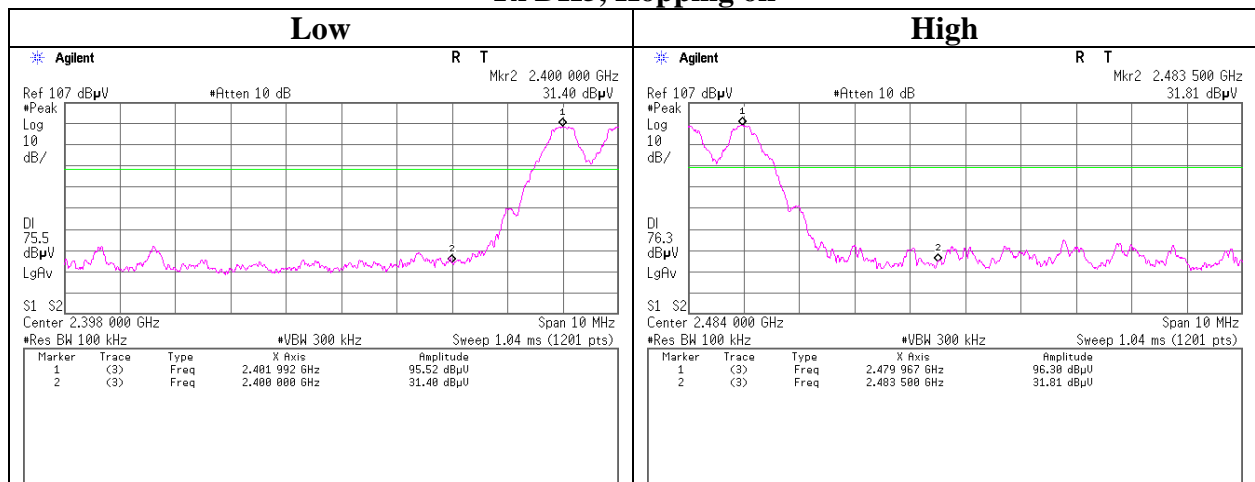
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Conducted Emission Band Edge compliance

Tx DH5, Hopping off



Tx DH5, Hopping on



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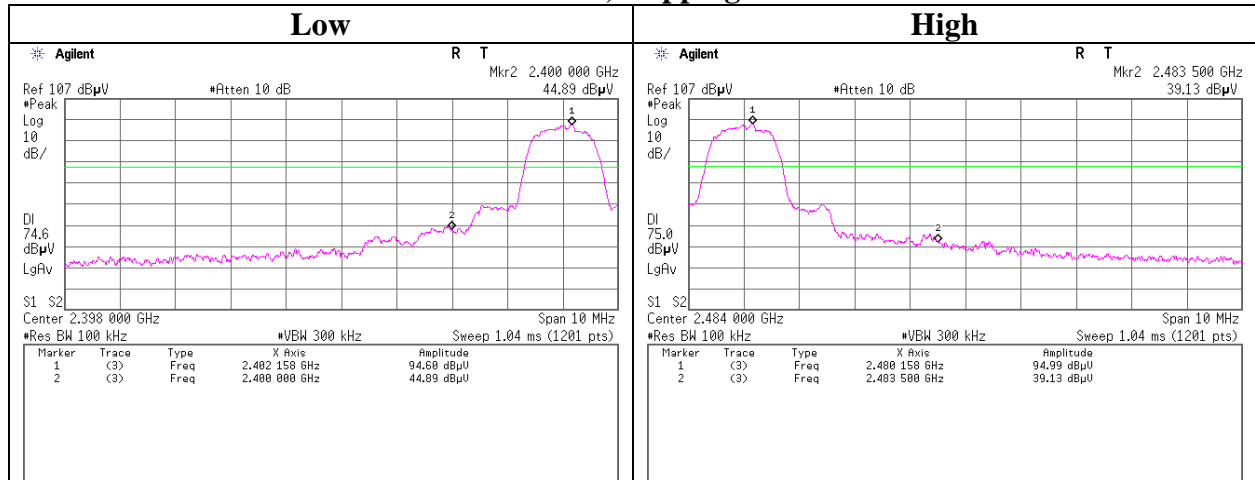
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Telephone : +81 596 24 8999

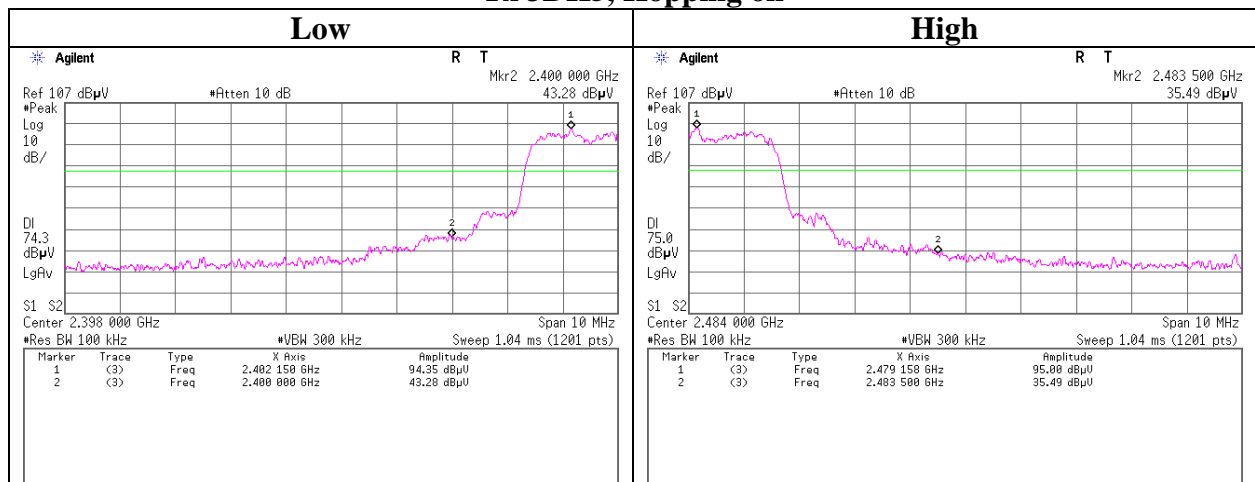
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Conducted Emission Band Edge compliance

Tx 3DH5, Hopping off



Tx 3DH5, Hopping on



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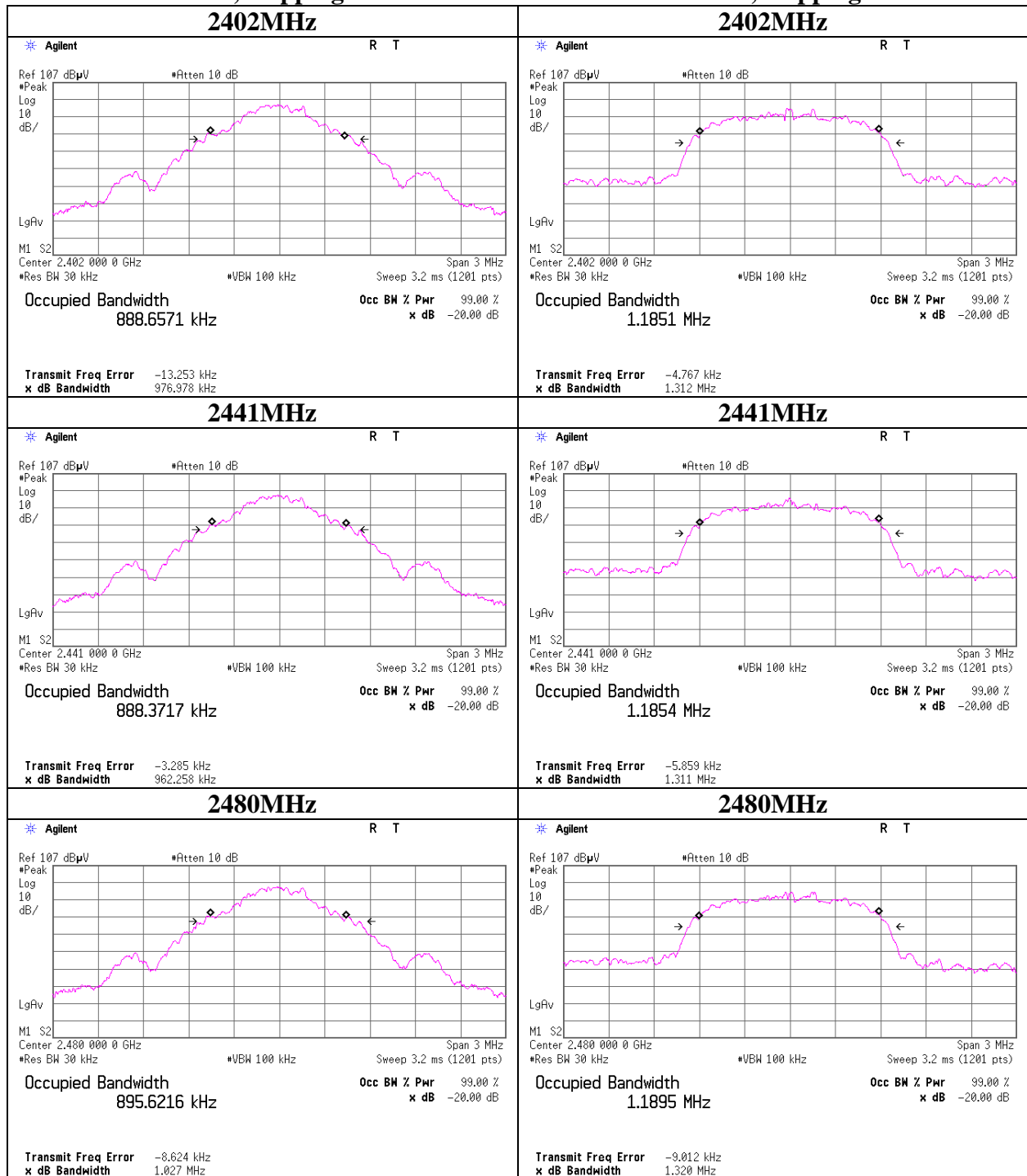
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99% Occupied Bandwidth

Tx DH5, Hopping off

Tx 3DH5, Hopping off



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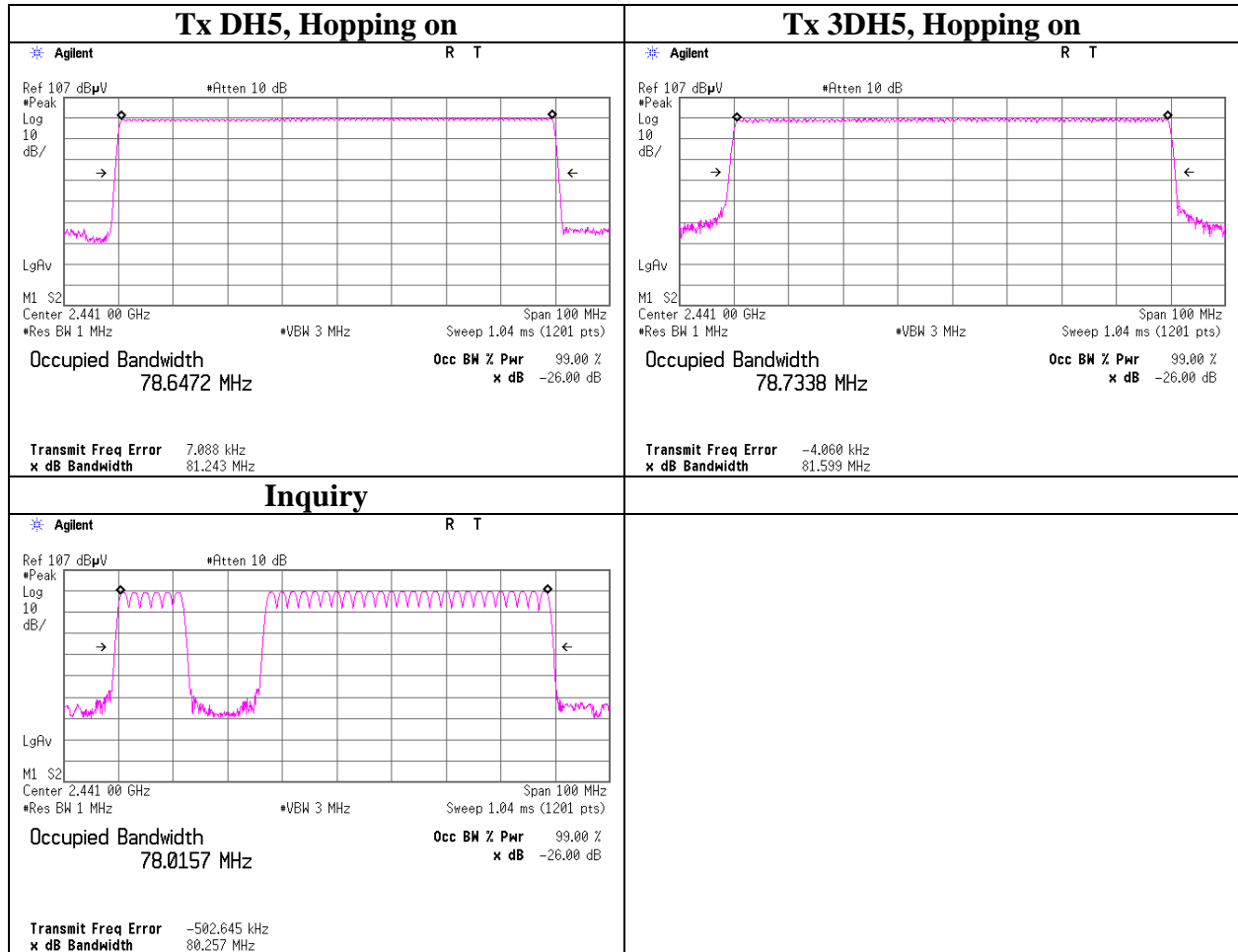
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99% Occupied Bandwidth



APPENDIX 2: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	AT	2013/04/03 * 12
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2013/03/21 * 12
MCC-67	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	28635/2	AT	2013/04/16 * 12
MPM-09	Power Meter	Anritsu	ML2495A	6K00003348	AT	2012/10/08 * 12
MPSE-12	Power sensor	Anritsu	MA2411B	011598	AT	2012/10/08 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-201	-	AT	2013/02/26 * 12
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	CE/RE	2013/02/28 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	-	CE/RE	2013/02/26 * 12
MJM-16	Measure	KOMELON	KMC-36	-	CE/RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	CE/RE	-
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	CE	2012/11/21 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	CE/RE	2012/08/23 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE(EUT)	2013/01/07 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE(AE)	2013/01/07 * 12
MTA-30	Terminator	TME	CT-01	-	CE	2013/01/10 * 12
MCC-112	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/SFM141(3m)/sucoform141-PE(1m)/421-010(1.5m)/RFM-E321(Switcher)	-/00640	CE	2012/07/12 * 12
MAT-66	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2013/01/22 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE	2012/11/20 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2013/05/17 * 12
MCC-133	Microwave Cable	HUBER+SUHNER	SUCOFLEX104	336164/4(1m) / 340640(5m)	RE	2012/09/05 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2013/03/12 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2013/05/17 * 12
MCC-76	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278967/4	RE	2012/12/24 * 12
MHF-19	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	602	RE	2012/09/12 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2012/10/08 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	174	RE	2012/10/08 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2012/07/12 * 12
MAT-70	Attenuator(6dB)	Agilent	8491A-006	MY52460153	RE	2013/04/05 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2013/03/12 * 12

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

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

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

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