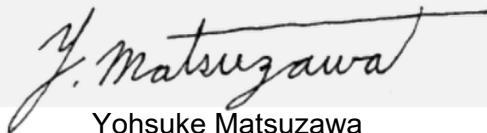


EMI TEST REPORT

Test Report No.15263628S-G-R2

Customer	Panasonic Automotive Systems Co., Ltd.
Description of EUT	Car AV Control Unit for CDC
Model Number of EUT	AM2301
FCC ID	ACJ932AM2301
Test Regulation	FCC Part 15 Subpart B, Class B
Test Result	Complied
Issue Date	January 29, 2025
Remarks	-

Representative test engineerYohsuke Matsuzawa
Engineer**Approved by**Shinichi Takano
Engineer

CERTIFICATE 1266.03

- ☐ The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan, Inc.
- ☒ There is no testing item of "Non-accreditation".

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- This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
- The results in this report apply only to the sample tested. (Laboratory was not involved in sampling.)
- This sample tested is in compliance with the limits of the above regulation.
- The test results in this test report are traceable to the national or international standards.
- This test report must not be used by the customer to claim product certification, approval, or endorsement by the A2LA accreditation body.
- This test report covers EMC technical requirements.
It does not cover administrative issues such as Manual or non-EMC test related Requirements. (if applicable)
- All test items in this test report are conducted by UL Japan, Inc. Shonan EMC Lab.
- The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan, Inc. has been accredited.
- The information provided by the customer for this report is identified in Section 1.
- The laboratory is not responsible for information provided by the customer which can impact the validity of the results.
- For test report(s) referred in this report, the latest version (including any revisions) is always referred.

REVISION HISTORY

Original Test Report No. 15263628S-G

This report is a revised version of 15263628S-G-R1. 15263628S-G-R1 is replaced with this report.

Revision	Test report No.	Date	Revised Contents
- (Original)	15263628S-G	December 20, 2024	-
1	15263628S-G-R1	January 27, 2025	Appendix4 Correction of serial no. of EUT From: MCDL_DCV_HWB_076 To: MCDL_DCV_HWC_076
2	15263628S-G-R2	January 29, 2025	5.3 Correction of position comment From: -30, 0deg and -30 deg To: -30, 0deg and +30 deg Appendix 3 Addition of Pre-Check Worst Case Position photos

Reference: Abbreviations (Including words undescribed in this report)

A2LA	The American Association for Laboratory Accreditation	ICES	Interference-Causing Equipment Standard
AAN	Asymmetric Artificial Network	I/O	Input/Output
AC	Alternating Current	IEC	International Electrotechnical Commission
AE	Auxiliary equipment	IEEE	Institute of Electrical and Electronics Engineers
AM	Amplitude Modulation	IF	Intermediate Frequency
AMN	Artificial Mains Network	ILAC	International Laboratory Accreditation Conference
Amp, AMP	Amplifier	ISED	Innovation, Science and Economic Development Canada
ANSI	American National Standards Institute	ISN	Impedance Stabilization Network
Ant, ANT	Antenna	ISO	International Organization for Standardization
AP	Access Point	JAB	Japan Accreditation Board
ASK	Amplitude Shift Keying	LAN	Local Area Network
Atten., ATT	Attenuator	LCL	Longitudinal Conversion Loss
AV	Average	LIMS	Laboratory Information Management System
BPSK	Binary Phase-Shift Keying	LISN	Line Impedance Stabilization Network
BR	Bluetooth Basic Rate	MRA	Mutual Recognition Arrangement
BT	Bluetooth	N/A	Not Applicable
BT LE	Bluetooth Low Energy	NIST	National Institute of Standards and Technology
BW	BandWidth	NS	No signal detect.
C.F	Correction Factor	NSA	Normalized Site Attenuation
Cal Int	Calibration Interval	OBW	Occupied BandWidth
CAV	CISPR AV	OFDM	Orthogonal Frequency Division Multiplexing
CCK	Complementary Code Keying	PER	Packet Error Rate
CDN	Coupling Decoupling Network	PK	Peak
Ch., CH	Channel	P _{LT}	long-term flicker severity
CISPR	Comite International Special des Perturbations Radioelectriques	POHC(A)	Partial Odd Harmonic Current
Corr.	Correction	Pol., Pola.	Polarization
CPE	Customer premise equipment	PR-ASK	Phase Reversal ASK
CW	Continuous Wave	P _{ST}	short-term flicker severity
DBPSK	Differential BPSK	QAM	Quadrature Amplitude Modulation
DC	Direct Current	QP	Quasi-Peak
DET	Detector	QPSK	Quadrature Phase Shift Keying
D-factor, D.fac.	Distance factor	r.m.s., RMS	Root Mean Square
Dmax	maximum absolute voltage change during an observation period	RBW	Resolution BandWidth
DQPSK	Differential QPSK	RE	Radio Equipment
DSSS	Direct Sequence Spread Spectrum	REV	Reverse
DUT	Device Under Test	RF	Radio Frequency
EDR	Enhanced Data Rate	RFID	Radio Frequency Identifier
e.i.r.p., EIRP	Equivalent Isotropically Radiated Power	RNSS	Radio Navigation Satellite Service
EM clamp	Electromagnetic clamp	RSS	Radio Standards Specifications
EMC	ElectroMagnetic Compatibility	Rx	Receiving
EMI	ElectroMagnetic Interference	S.fac.	Site factor
EMS	ElectroMagnetic Susceptibility	SINAD	Ratio of (Signal + Noise + Distortion) to (Noise + Distortion)
EN	European Norm	S/N	Signal to Noise ratio
e.r.p., ERP	Effective Radiated Power	SA, S/A	Spectrum Analyzer
ETSI	European Telecommunications Standards Institute	SABS	South African Bureau of Standards
EU	European Union	SANS	South African National Standards
EUT	Equipment Under Test	SG	Signal Generator
Fac.	Factor	SVSWR	Site-Voltage Standing Wave Ratio
FCC	Federal Communications Commission	THC(A)	Total Harmonic Current
FHSS	Frequency Hopping Spread Spectrum	THD(%)	Total Harmonic Distortion
FM	Frequency Modulation	TR, T/R	Test Receiver
Freq.	Frequency	Tx	Transmitting
FSK	Frequency Shift Keying	VBW	Video BandWidth
Fund	Fundamental	Vert.	Vertical
FWD	Forward	WLAN	Wireless LAN
GFSK	Gaussian Frequency-Shift Keying	xDSL	Generic term for all types of DSL technology (DSL: Digital Subscriber Line)
GNSS	Global Navigation Satellite System		
GPS	Global Positioning System		
Hori.	Horizontal		
HPF	High-Pass Filter		

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Section 1: Customer information

Company Name	Panasonic Automotive Systems Co., Ltd.*1)
Address	4261, Ikonobe-cho, Tsuzuki-ku, Yokohama-shi, Kanagawa-ken 224-8520, Japan
Telephone Number	+81-80-7194-8870
Contact Person	Minoru Osada

*1) The Grantee name in the FCC application is "Panasonic Corporation of North America".

The Information provided by the customer is as follows;

- Customer, Description of EUT, Model Number of EUT on the cover and other relevant pages
- Operating/Test Mode(s) (Mode(s)) on all the relevant pages
- Section 1: Customer Information
- Section 2: Equipment Under Test (EUT) other than the Receipt Date and Test Date
- Section 4: Operation of EUT during testing
- Appendix 4: Variant models list

Section 2 : Equipment under test (EUT)

2.1 Identification of EUT

Description	Car AV Control Unit for CDC
Model Number	AM2301
Serial Number	Refer to 4.2
Condition	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	No Modification by the test lab.
Receipt Date	October 30, 2024
Test Date	November 8 to 15, 2024

2.2 Product description

General Specification

Rating	DC 13.2 V
Clock frequency (ies) in the system	10 MHz, 55.46667 MHz, 48 MHz, 26 MHz

Radio Specification

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

Equipment Type	Transceiver
Frequency of Operation	2412 MHz to 2462 MHz
Type of Modulation	DSSS, OFDM OFDMA: (20 MHz band): 26/52/106/242-tone RU
Antenna Gain	1st Antenna: 4.0 dBi 2nd Antenna: 4.0 dBi

Bluetooth (BR / EDR / Low Energy)

Equipment Type	Transceiver
Frequency of Operation	2402 MHz to 2480 MHz
Type of Modulation	BT: FHSS (GFSK, $\pi/4$ DQPSK, 8 DPSK) BT LE: GFSK
Antenna Gain	4.0 dBi

WLAN (IEEE802.11a/11n-20/11ac-20/11ax-20/11n-40/11ac-40/11ax-40/11ac-80/11ax-80)

Equipment Type	Transceiver	
Frequency of Operation	20 MHz Band:	5745 MHz to 5825 MHz
	40 MHz Band:	5755 MHz to 5795 MHz
	80 MHz Band:	5775 MHz
Type of Modulation	OFDM, OFDMA	
	OFDMA (IEEE802.11ax only)	(20 MHz band): 26/52/106/242-tone RU
		(40 MHz band): 26/52/106/242/484-tone RU
		(80 MHz band): 26/52/106/242/484/996-tone RU
Antenna Gain ^{a)}	1st Antenna:	6.0 dBi
	2nd Antenna:	6.0 dBi

[FM]

Equipment Type	Receiver
Frequency of Operation	87.75 MHz to 107.9 MHz
Type of Modulation	FM
Antenna Connector Type	Car manufacturer original
Impedance	75 ohm

Section 3 : Test specification, procedures and results

3.1 Test specification

Test Specification	FCC Part 15 Subpart B The latest version on the first day of the testing period
Title	FCC 47CFR Part15 Radio Frequency Device Subpart B Unintentional Radiators

3.2 Procedures & results

Item	Test procedure	Limits	Worst margin	Result	Remarks
Conducted emission	ANSI C 63.4:2014 /C 63.4a:2017 7. AC powerline conducted emission measurements	FCC 15.107 (a)	-	N/A	*1)
Radiated emission	ANSI C 63.4:2014 /C 63.4a:2017 8. Radiated emission measurements	FCC 15.109 (a)	3.7 dB Freq.: 793.641 MHz Detector: QP Polarization: Horizontal Mode: FM Receiving (97.9 MHz) _digital, Main port, Other	Complied	*2) *3)
Antenna power conduction for receivers	ANSI C 63.4:2014 /C 63.4a:2017 12.2.1 Antenna-conducted power measurements IEEE 187:2003	FCC 15.111 (a)	18.3 dB Freq.: 25837.500 MHz Detection: PEAK Mode: FM Receiving (97.9 MHz) _digital, Main port, Other	Complied	-

Note: UL Japan's EMI work procedure: Work Instructions-ULID-003591

*1) The test is not applicable since the EUT does not have AC main ports.

*2) Measurements have been performed up to 30 GHz since the highest frequency of internal source of the EUT is 5825 MHz.

*3) Measured at Main port, which is the port with the worst margin of Antenna power conduction for receivers test.

3.3 Deviation from standard

No addition, exclusion nor deviation has been made from the standard.

3.4 Uncertainty

Measurement uncertainty is not taken into account when stating conformity with a specified requirement.
Note: When margins obtained from test results are less than the measurement uncertainty, the test results may exceed the limit.

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

Item	Frequency range	Calculated Uncertainty ($\pm$)
Radiated emission (Measurement distance: 3 m)	30 MHz to 200 MHz	4.8 dB
	200 MHz to 1 GHz	6.1 dB
Radiated emission (Measurement distance: 3 m)	1 GHz to 6 GHz	4.7 dB
	6 GHz to 10 GHz	5.3 dB
Radiated emission (Measurement distance: 1 m)	10 GHz to 18 GHz	5.6 dB
	18 GHz to 40 GHz	5.8 dB
Antenna Terminal Voltage	5 MHz to 1000 MHz	3.2 dB
	above 1 GHz	2.7 dB

3.5 Test location

UL Japan, Inc. Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 Japan

Telephone number : +81-463-50-6400

A2LA Certificate Number : 1266.03

(FCC Test firm registration number: 626366, ISED lab company number: 2973D / CAB identifier: JP0001)

Test room	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Semi-anechoic chamber (SAC1)	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.2 Semi-anechoic chamber (SAC2)	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.3 Semi-anechoic chamber (SAC3)	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
No.4 Semi-anechoic chamber (SAC4)	8.1 x 5.1 x 3.55	8.1 x 5.1	-
Wireless anechoic chamber 1 (WAC1)	9.5 x 6.0 x 5.4	9.5 x 6.0	3 m
Wireless anechoic chamber 2 (WAC2)	9.5 x 6.0 x 5.4	9.5 x 6.0	3 m
No.1 Shielded room	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.2 Shielded room	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.3 Shielded room	6.3 x 4.7 x 2.7	6.3 x 4.7	-
No.4 Shielded room	4.4 x 4.7 x 2.7	4.4 x 4.7	-
No.5 Shielded room	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.6 Shielded room	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.8 Shielded room	3.45 x 5.5 x 2.4	3.45 x 5.5	-
No.1 Measurement room	2.55 x 4.1 x 2.5	-	-
No.2 Measurement room	4.5 x 3.5 x 2.5	-	-
Wireless shielded room 1	3.0 x 4.5 x 2.7	3.0 x 4.5	-
Wireless shielded room 2	3.0 x 4.5 x 2.7	3.0 x 4.5	-

3.6 Test setup, test data & test instruments

Refer to Appendix 1 to 3.

Section 4 : Operation of EUT during testing

4.1 Operating modes

The EUT exercise program used during testing was designed to exercise the various system components in a manner similar to typical use.

Operation mode(s)	1. FM Reception (87.75 MHz) (analog/digital)
	2. FM Reception (97.9 MHz) (analog/digital)
	3. FM Reception (107.9 MHz) (analog/digital)
Software	TDG01000013S13
Justification	The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals

This page has been submitted for separate exhibit (refer to APPENDIX 4).

Section 5 : Radiated emission

5.1 Test conditions

Frequency range	30 MHz to 30 GHz
EUT position	Table top

5.2 Test configuration

The EUT was placed on a platform of nominal size, 1.0 m by 2.0 m, raised 0.8 m above the conducting ground plane. The table is made of expanded polystyrol and expanded polypropylene and the table top is covered with polycarbonate. That has very low permittivity. The rear of EUT, including its peripherals was aligned and flushed with rear of tabletop. I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30 cm to 40 cm long and were hanged at a 40 cm height to the ground plane.

Photographs of the setup are shown in Appendix 3.

5.3 Test procedure

The Radiated Electric Field Strength intensity has been measured in a Semi-Anechoic Chamber with a ground plane at a distance of 3 m.

The boundary of the EUT is defined by an imaginary circular periphery.

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

The measurements were performed for both vertical and horizontal antenna polarization.

Test antenna was aimed at the emission source for receiving the maximum signal and always kept. (above 1 GHz)

The radiated emission measurements were made with the following detector function.

	30 MHz to 1000 MHz (Test receiver)	1 GHz to 30 GHz (Spectrum analyzer)	
Detector Type	QP	AV *1)	PK
IF Bandwidth	120 kHz	RBW 1 MHz/ VBW 10 Hz	RBW 1 MHz/ VBW 3 MHz

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

The noise levels were confirmed at each position of -30, 0deg and +30 deg of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

	Horizontal	Vertical
Below 1 GHz	0 deg.	0 deg.
1 GHz to 10 GHz	+30 deg.	+30 deg.
10 GHz to 18 GHz	0 deg.	0 deg.
18 GHz to 26.5 GHz	-30 deg.	0 deg.
Above 26.5 GHz	0 deg.	0 deg.

5.4 Results

Summary of the test results: Pass

Figure 1. Antenna angle

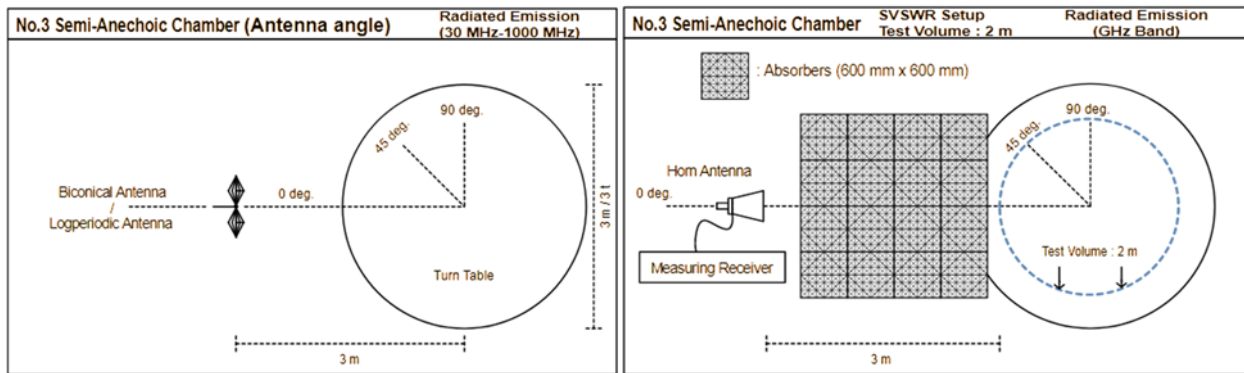
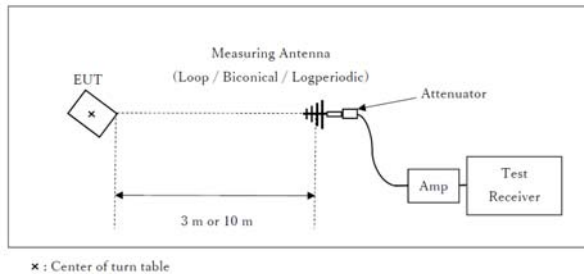


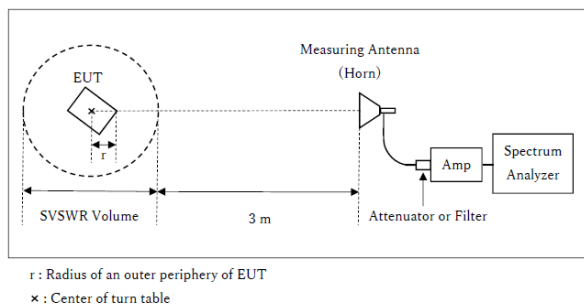
Figure 2. Test Setup

Below 1 GHz



Test Distance: 3 m

1 GHz to 30 GHz



Distance Factor: $20 \times \log (3.20 \text{ m}^*/3.0 \text{ m}) = 0.57 \text{ dB}$
* Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.20 \text{ cm}$

SVSWR Volume: 2 m
(SVSWR Volume has been calibrated based on CISPR 16-1-4.)
 $r = 0.80 \text{ m}$

Distance Factor is based on FCC Subpart A Section 15.31 (f).

Section 6 : Antenna power conduction for receivers

6 . 1 Test conditions

Frequency range	30 MHz to 30 GHz
EUT position	Table top

6 . 2 Test configuration

The EUT was placed on a non-metallic table height of 0.8 m above the reference ground plane. Photographs of the set up are shown in Appendix 3.

6 . 3 Test procedure

The antenna power conduction for receivers was made with the following detector function of the test receiver.

	30 MHz to 1000 MHz	1 GHz to 30 GHz
Detector Type	QP	PK
IF Bandwidth	120 kHz	RBW 1 MHz/ VBW 3 MHz

6 . 4 Results

Summary of the test results: Pass

DATA OF RADIATED EMISSION TEST

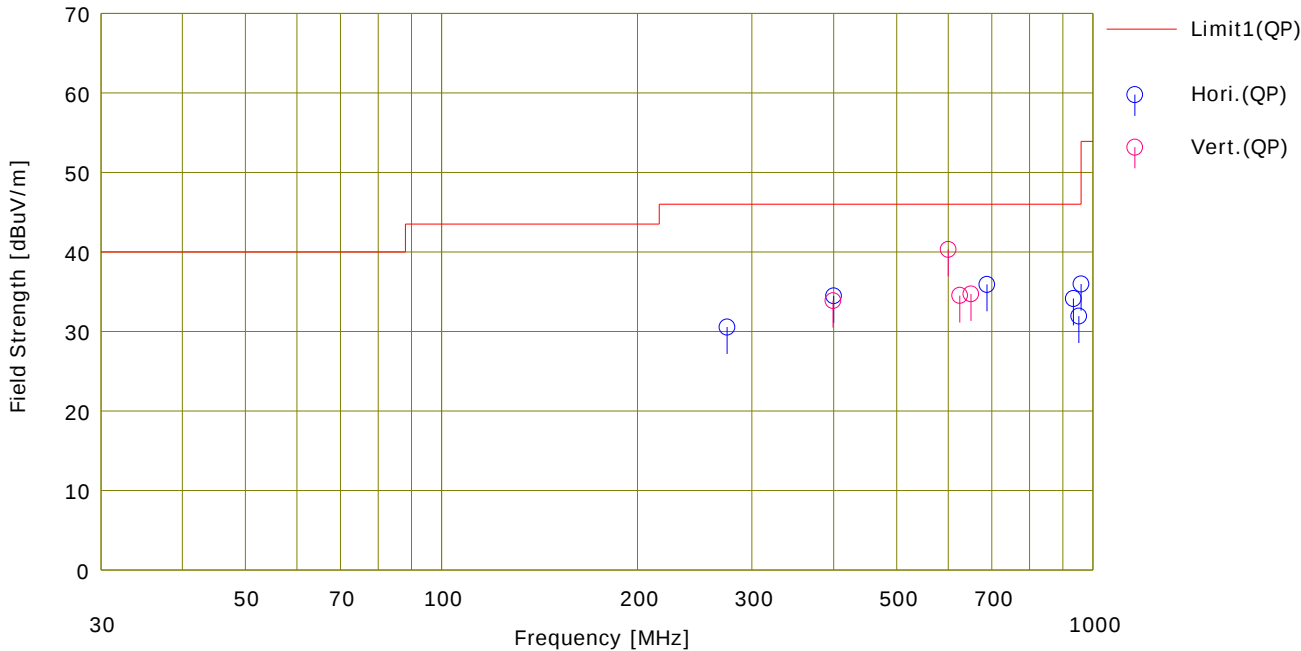
UL Japan,Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2024/11/12

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076
Remarks : Main port, Other

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 22 deg.C / 34 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba



No.	Freq.	Reading	Ant.Fac	Loss	Gain	S.Fac	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>					<QP>	<QP>	<QP>					
		[dBuV]					[dBuV/m]	[dBuV/m]	[dB]					
1	274.608	41.80	12.09	8.62	31.96	0.00	30.55	46.00	15.4	Hori.	161	170	LP	
2	399.995	42.00	15.08	9.30	31.91	0.00	34.47	46.00	11.5	Hori.	100	319	LP	
3	687.979	37.10	20.02	10.62	31.83	0.00	35.91	46.00	10.0	Hori.	134	258	LP	
4	933.913	31.30	22.08	11.49	30.73	0.00	34.14	46.00	11.8	Hori.	122	54	LP	
5	952.333	28.60	22.37	11.56	30.59	0.00	31.94	46.00	14.0	Hori.	107	55	LP	
6	959.996	32.30	22.61	11.58	30.51	0.00	35.98	46.00	10.0	Hori.	100	218	LP	
7	399.216	41.40	15.08	9.29	31.91	0.00	33.86	46.00	12.1	Vert.	136	194	LP	
8	600.006	43.50	18.46	10.24	31.88	0.00	40.32	46.00	5.6	Vert.	100	183	LP	
9	625.009	37.10	18.95	10.34	31.87	0.00	34.52	46.00	11.4	Vert.	100	158	LP	
10	650.388	36.60	19.54	10.44	31.86	0.00	34.72	46.00	11.2	Vert.	100	189	LP	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/12

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Main port, Local

Mode : FM Receiving (87.75 MHz)_analog
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 22 deg.C / 34 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	S.Fac	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>					<QP>	<QP>	<QP>					
		[dBuV]					[dBuV/m]	[dBuV/m]	[dB]					
1	110.240	27.70	11.85	7.43	32.11	-0.13	14.74	43.50	28.7	Hori.	290	167	BC	
2	220.480	35.00	10.31	8.27	32.00	0.00	21.58	46.00	24.4	Hori.	154	333	LP	
3	330.720	29.60	13.50	8.95	31.92	0.00	20.13	46.00	25.8	Hori.	100	349	LP	
4	440.960	25.80	15.79	9.51	31.91	0.00	19.19	46.00	26.8	Hori.	260	280	LP	
5	551.200	22.90	17.71	10.06	31.93	0.00	18.74	46.00	27.2	Hori.	100	133	LP	
6	661.440	25.90	19.75	10.49	31.85	0.00	24.29	46.00	21.7	Hori.	145	244	LP	
7	771.680	23.60	20.66	10.93	31.63	0.00	23.56	46.00	22.4	Hori.	100	281	LP	
8	881.920	21.40	22.15	11.31	31.08	0.00	23.78	46.00	22.2	Hori.	153	359	LP	
9	992.160	20.80	23.11	11.69	30.16	0.00	25.44	53.90	28.4	Hori.	177	163	LP	
10	110.240	23.60	11.85	7.43	32.11	-0.13	10.64	43.50	32.8	Vert.	100	230	BC	
11	220.480	28.50	10.31	8.27	32.00	0.00	15.08	46.00	30.9	Vert.	245	232	LP	
12	330.720	24.20	13.50	8.95	31.92	0.00	14.73	46.00	31.2	Vert.	100	192	LP	
13	440.960	23.10	15.79	9.51	31.91	0.00	16.49	46.00	29.5	Vert.	100	220	LP	
14	551.200	22.40	17.71	10.06	31.93	0.00	18.24	46.00	27.7	Vert.	198	6	LP	
15	661.440	22.50	19.75	10.49	31.85	0.00	20.89	46.00	25.1	Vert.	148	359	LP	
16	771.680	21.20	20.66	10.93	31.63	0.00	21.16	46.00	24.8	Vert.	151	323	LP	
17	881.920	20.80	22.15	11.31	31.08	0.00	23.18	46.00	22.8	Vert.	100	1	LP	
18	992.160	20.10	23.11	11.69	30.16	0.00	24.74	53.90	29.1	Vert.	100	190	LP	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable + ATT)[dB] - Gain(AMP)[dB] + S.Fac(ΔAF)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2024/11/12

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076
Remarks : Main port, Local

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 22 deg.C / 34 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	S.Fac	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>					<QP>	<QP>	<QP>					
		[dBuV]					[dBuV/m]	[dBuV/m]	[dB]					
1	110.240	27.40	11.85	7.43	32.11	-0.13	14.44	43.50	29.0	Hori.	290	218	BC	
2	220.480	36.80	10.31	8.27	32.00	0.00	23.38	46.00	22.6	Hori.	149	317	LP	
3	330.720	29.90	13.50	8.95	31.92	0.00	20.43	46.00	25.5	Hori.	100	298	LP	
4	440.960	25.80	15.79	9.51	31.91	0.00	19.19	46.00	26.8	Hori.	260	281	LP	
5	551.200	23.30	17.71	10.06	31.93	0.00	19.14	46.00	26.8	Hori.	100	133	LP	
6	661.440	25.20	19.75	10.49	31.85	0.00	23.59	46.00	22.4	Hori.	145	244	LP	
7	771.680	23.60	20.66	10.93	31.63	0.00	23.56	46.00	22.4	Hori.	100	230	LP	
8	881.920	21.00	22.15	11.31	31.08	0.00	23.38	46.00	22.6	Hori.	153	359	LP	
9	992.160	21.50	23.11	11.69	30.16	0.00	26.14	53.90	27.7	Hori.	178	163	LP	
10	110.240	23.40	11.85	7.43	32.11	-0.13	10.44	43.50	33.0	Vert.	100	230	BC	
11	220.480	30.20	10.31	8.27	32.00	0.00	16.78	46.00	29.2	Vert.	223	203	LP	
12	330.720	23.60	13.50	8.95	31.92	0.00	14.13	46.00	31.8	Vert.	100	198	LP	
13	440.960	23.80	15.79	9.51	31.91	0.00	17.19	46.00	28.8	Vert.	100	194	LP	
14	551.200	22.40	17.71	10.06	31.93	0.00	18.24	46.00	27.7	Vert.	198	6	LP	
15	661.440	22.40	19.75	10.49	31.85	0.00	20.79	46.00	25.2	Vert.	148	359	LP	
16	771.680	21.50	20.66	10.93	31.63	0.00	21.46	46.00	24.5	Vert.	151	270	LP	
17	881.920	20.80	22.15	11.31	31.08	0.00	23.18	46.00	22.8	Vert.	100	1	LP	
18	992.160	20.10	23.11	11.69	30.16	0.00	24.74	53.90	29.1	Vert.	100	290	LP	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/12

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Main port, Local

Mode : FM Receiving (107.9 MHz)_analog
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 22 deg.C / 34 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	S.Fac	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>					<QP>	<QP>	<QP>					
		[dBuV]					[dBuV/m]	[dBuV/m]	[dB]					
1	110.240	27.30	11.85	7.43	32.11	-0.13	14.34	43.50	29.1	Hori.	290	167	BC	
2	220.480	35.40	10.31	8.27	32.00	0.00	21.98	46.00	24.0	Hori.	154	333	LP	
3	330.720	29.30	13.50	8.95	31.92	0.00	19.83	46.00	26.1	Hori.	100	349	LP	
4	440.960	25.60	15.79	9.51	31.91	0.00	18.99	46.00	27.0	Hori.	260	280	LP	
5	551.200	23.30	17.71	10.06	31.93	0.00	19.14	46.00	26.8	Hori.	100	271	LP	
6	661.440	25.50	19.75	10.49	31.85	0.00	23.89	46.00	22.1	Hori.	145	244	LP	
7	771.680	23.60	20.66	10.93	31.63	0.00	23.56	46.00	22.4	Hori.	100	270	LP	
8	881.920	21.50	22.15	11.31	31.08	0.00	23.88	46.00	22.1	Hori.	153	359	LP	
9	992.160	20.80	23.11	11.69	30.16	0.00	25.44	53.90	28.4	Hori.	177	252	LP	
10	110.240	23.40	11.85	7.43	32.11	-0.13	10.44	43.50	33.0	Vert.	100	230	BC	
11	220.480	29.60	10.31	8.27	32.00	0.00	16.18	46.00	29.8	Vert.	245	232	LP	
12	330.720	24.30	13.50	8.95	31.92	0.00	14.83	46.00	31.1	Vert.	100	198	LP	
13	440.960	23.80	15.79	9.51	31.91	0.00	17.19	46.00	28.8	Vert.	100	208	LP	
14	551.200	23.00	17.71	10.06	31.93	0.00	18.84	46.00	27.1	Vert.	198	6	LP	
15	661.440	22.50	19.75	10.49	31.85	0.00	20.89	46.00	25.1	Vert.	145	222	LP	
16	771.680	22.10	20.66	10.93	31.63	0.00	22.06	46.00	23.9	Vert.	145	187	LP	
17	881.920	20.90	22.15	11.31	31.08	0.00	23.28	46.00	22.7	Vert.	100	1	LP	
18	992.160	20.50	23.11	11.69	30.16	0.00	25.14	53.90	28.7	Vert.	100	186	LP	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable + ATT)[dB] - Gain(AMP)[dB] + S.Fac(ΔAF)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

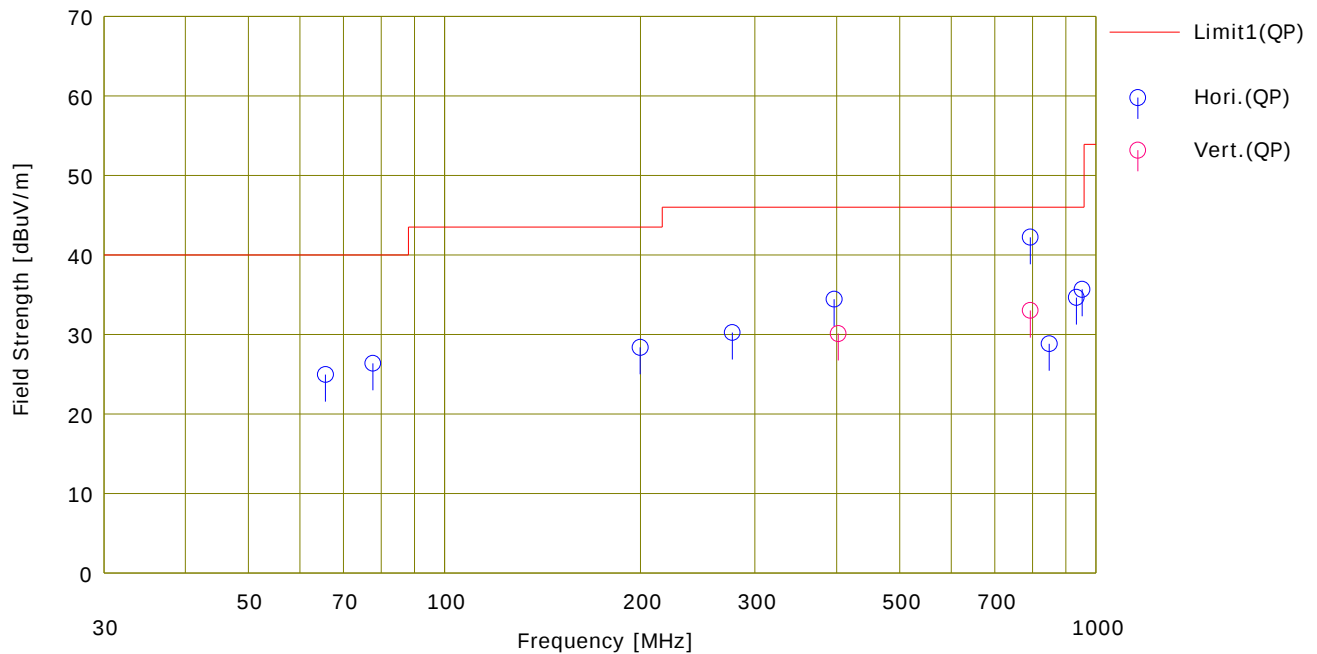
Date : 2024/11/13

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Main port, Other

Mode : FM Receiving (97.9 MHz)_digital
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba



No.	Freq. [MHz]	Reading <QP> [dBuV]	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result <QP> [dBuV/m]	Limit <QP> [dBuV/m]	Margin <QP> [dB]	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
1	65.728	43.50	7.08	6.98	32.14	-0.46	24.96	40.00	15.0	Hori.	303	289	BC	
2	77.674	44.80	6.29	7.10	32.13	0.31	26.37	40.00	13.6	Hori.	242	279	BC	
3	199.885	35.90	16.51	8.13	32.02	-0.15	28.37	43.50	15.1	Hori.	130	134	BC	
4	276.806	41.40	12.16	8.63	31.95	0.00	30.24	46.00	15.7	Hori.	107	237	LP	
5	396.753	42.00	15.06	9.28	31.91	0.00	34.43	46.00	11.5	Hori.	100	307	LP	
6	793.641	42.00	20.81	11.01	31.59	0.00	42.23	46.00	3.7	Hori.	121	268	LP	
7	848.710	27.30	21.60	11.21	31.28	0.00	28.83	46.00	17.1	Hori.	111	271	LP	
8	933.896	31.80	22.08	11.49	30.73	0.00	34.64	46.00	11.3	Hori.	107	125	LP	
9	952.806	32.30	22.39	11.56	30.59	0.00	35.66	46.00	10.3	Hori.	100	119	LP	
10	402.201	37.60	15.10	9.31	31.91	0.00	30.10	46.00	15.9	Vert.	152	205	LP	
11	793.221	32.80	20.80	11.01	31.59	0.00	33.02	46.00	12.9	Vert.	100	316	LP	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable + ATT)[dB] - Gain(AMP)[dB] + S.Fac(ΔAF)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/13

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Main port, Local

Mode : FM Receiving (87.75 MHz)_digital
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	S.Fac	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>					<QP>	<QP>	<QP>					
		[dBuV]					[dBuV/m]	[dBuV/m]	[dB]					
1	110.240	27.80	11.85	7.43	32.11	-0.13	14.84	43.50	28.6	Hori.	268	287	BC	
2	220.480	36.40	10.31	8.27	32.00	0.00	22.98	46.00	23.0	Hori.	149	331	LP	
3	330.720	28.30	13.50	8.95	31.92	0.00	18.83	46.00	27.1	Hori.	100	337	LP	
4	440.960	25.00	15.79	9.51	31.91	0.00	18.39	46.00	27.6	Hori.	100	339	LP	
5	551.200	25.00	17.71	10.06	31.93	0.00	20.84	46.00	25.1	Hori.	100	277	LP	
6	661.440	24.10	19.75	10.49	31.85	0.00	22.49	46.00	23.5	Hori.	100	227	LP	
7	771.680	25.00	20.66	10.93	31.63	0.00	24.96	46.00	21.0	Hori.	100	254	LP	
8	881.920	22.40	22.15	11.31	31.08	0.00	24.78	46.00	21.2	Hori.	100	257	LP	
9	992.160	21.10	23.11	11.69	30.16	0.00	25.74	53.90	28.1	Hori.	100	222	LP	
10	110.240	29.90	11.85	7.43	32.11	-0.13	16.94	43.50	26.5	Vert.	100	88	BC	
11	220.480	31.90	10.31	8.27	32.00	0.00	18.48	46.00	27.5	Vert.	221	220	LP	
12	330.720	25.10	13.50	8.95	31.92	0.00	15.63	46.00	30.3	Vert.	166	230	LP	
13	440.960	23.30	15.79	9.51	31.91	0.00	16.69	46.00	29.3	Vert.	100	179	LP	
14	551.200	22.60	17.71	10.06	31.93	0.00	18.44	46.00	27.5	Vert.	100	162	LP	
15	661.440	23.90	19.75	10.49	31.85	0.00	22.29	46.00	23.7	Vert.	100	200	LP	
16	771.680	22.60	20.66	10.93	31.63	0.00	22.56	46.00	23.4	Vert.	154	189	LP	
17	881.920	20.70	22.15	11.31	31.08	0.00	23.08	46.00	22.9	Vert.	100	41	LP	
18	992.160	20.80	23.11	11.69	30.16	0.00	25.44	53.90	28.4	Vert.	100	349	LP	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable + ATT)[dB] - Gain(AMP)[dB] + S.Fac(ΔAF)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/13

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Main port, Local

Mode : FM Receiving (97.9 MHz)_digital
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	S.Fac	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>					<QP>	<QP>	<QP>					
		[dBuV]					[dBuV/m]	[dBuV/m]	[dB]					
1	110.240	26.30	11.85	7.43	32.11	-0.13	13.34	43.50	30.1	Hori.	302	301	BC	
2	220.480	35.70	10.31	8.27	32.00	0.00	22.28	46.00	23.7	Hori.	149	331	LP	
3	330.720	29.00	13.50	8.95	31.92	0.00	19.53	46.00	26.4	Hori.	100	337	LP	
4	440.960	26.60	15.79	9.51	31.91	0.00	19.99	46.00	26.0	Hori.	100	235	LP	
5	551.200	24.60	17.71	10.06	31.93	0.00	20.44	46.00	25.5	Hori.	100	277	LP	
6	661.440	23.70	19.75	10.49	31.85	0.00	22.09	46.00	23.9	Hori.	100	230	LP	
7	771.680	26.90	20.66	10.93	31.63	0.00	26.86	46.00	19.1	Hori.	100	260	LP	
8	881.920	22.50	22.15	11.31	31.08	0.00	24.88	46.00	21.1	Hori.	100	257	LP	
9	992.160	21.50	23.11	11.69	30.16	0.00	26.14	53.90	27.7	Hori.	100	222	LP	
10	110.240	25.40	11.85	7.43	32.11	-0.13	12.44	43.50	31.0	Vert.	100	80	BC	
11	220.480	32.10	10.31	8.27	32.00	0.00	18.68	46.00	27.3	Vert.	221	224	LP	
12	330.720	24.90	13.50	8.95	31.92	0.00	15.43	46.00	30.5	Vert.	166	198	LP	
13	440.960	24.00	15.79	9.51	31.91	0.00	17.39	46.00	28.6	Vert.	100	208	LP	
14	551.200	22.70	17.71	10.06	31.93	0.00	18.54	46.00	27.4	Vert.	100	162	LP	
15	661.440	23.00	19.75	10.49	31.85	0.00	21.39	46.00	24.6	Vert.	100	230	LP	
16	771.680	23.60	20.66	10.93	31.63	0.00	23.56	46.00	22.4	Vert.	132	195	LP	
17	881.920	20.70	22.15	11.31	31.08	0.00	23.08	46.00	22.9	Vert.	100	20	LP	
18	992.160	20.70	23.11	11.69	30.16	0.00	25.34	53.90	28.5	Vert.	100	349	LP	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable + ATT)[dB] - Gain(AMP)[dB] + S.Fac(ΔAF)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/13

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Main port, Local

Mode : FM Receiving (107.9 MHz)_digital
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	S.Fac	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>					<QP>	<QP>	<QP>					
		[dBuV]					[dBuV/m]	[dBuV/m]	[dB]					
1	110.240	25.30	11.85	7.43	32.11	-0.13	12.34	43.50	31.1	Hori.	291	287	BC	
2	220.480	35.90	10.31	8.27	32.00	0.00	22.48	46.00	23.5	Hori.	149	340	LP	
3	330.720	28.80	13.50	8.95	31.92	0.00	19.33	46.00	26.6	Hori.	100	337	LP	
4	440.960	26.30	15.79	9.51	31.91	0.00	19.69	46.00	26.3	Hori.	100	98	LP	
5	551.200	25.90	17.71	10.06	31.93	0.00	21.74	46.00	24.2	Hori.	177	218	LP	
6	661.440	24.10	19.75	10.49	31.85	0.00	22.49	46.00	23.5	Hori.	100	244	LP	
7	771.680	23.80	20.66	10.93	31.63	0.00	23.76	46.00	22.2	Hori.	100	260	LP	
8	881.920	22.50	22.15	11.31	31.08	0.00	24.88	46.00	21.1	Hori.	100	255	LP	
9	992.160	21.00	23.11	11.69	30.16	0.00	25.64	53.90	28.2	Hori.	100	221	LP	
10	110.240	26.10	11.85	7.43	32.11	-0.13	13.14	43.50	30.3	Vert.	100	90	BC	
11	220.480	31.80	10.31	8.27	32.00	0.00	18.38	46.00	27.6	Vert.	221	220	LP	
12	330.720	25.10	13.50	8.95	31.92	0.00	15.63	46.00	30.3	Vert.	166	229	LP	
13	440.960	23.60	15.79	9.51	31.91	0.00	16.99	46.00	29.0	Vert.	100	181	LP	
14	551.200	22.90	17.71	10.06	31.93	0.00	18.74	46.00	27.2	Vert.	100	162	LP	
15	661.440	23.20	19.75	10.49	31.85	0.00	21.59	46.00	24.4	Vert.	100	210	LP	
16	771.680	22.40	20.66	10.93	31.63	0.00	22.36	46.00	23.6	Vert.	156	192	LP	
17	881.920	20.90	22.15	11.31	31.08	0.00	23.28	46.00	22.7	Vert.	100	41	LP	
18	992.160	21.10	23.11	11.69	30.16	0.00	25.74	53.90	28.1	Vert.	100	349	LP	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable+ATT)[dB] - Gain(AMP)[dB] + S.Fac(ΔAF)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

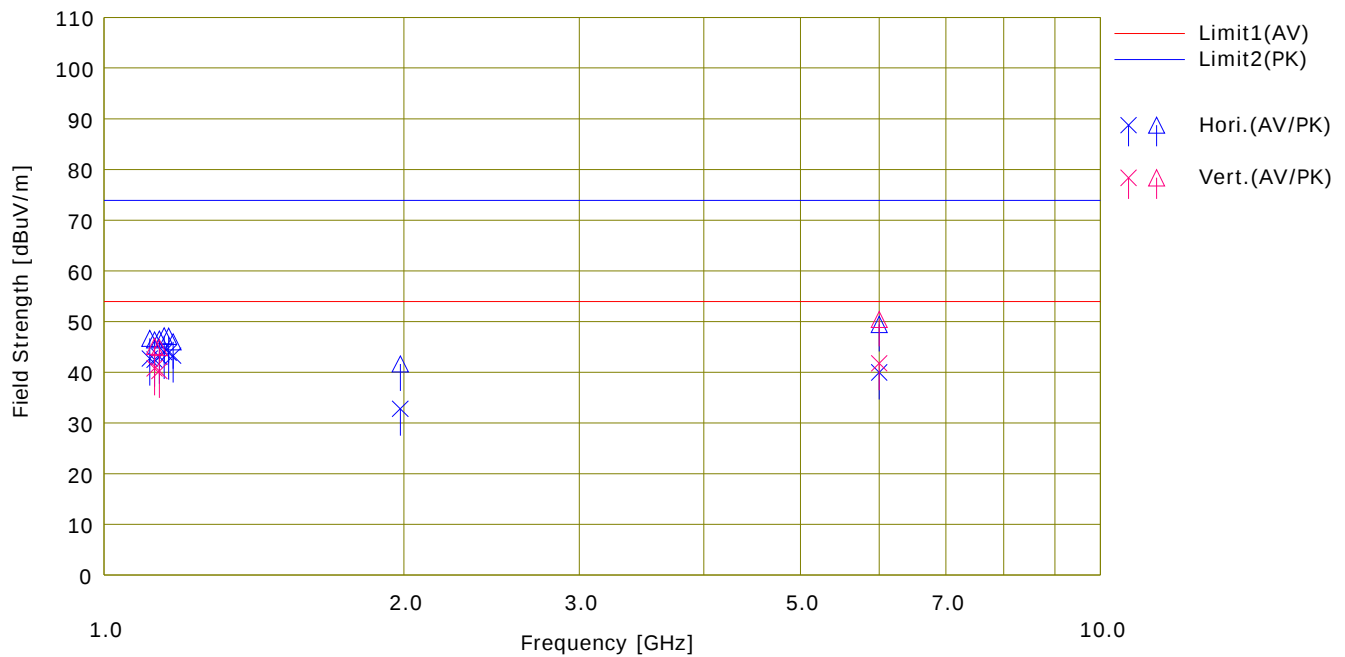
Date : 2024/11/14

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDC_DCV_HWC_076
 Remarks : Test Distance = 320 cm, Main port, Other

Mode : FM Receiving (97.9 MHz)_analog
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba



No.	Freq.	Reading		Ant.Fac	Loss	Gain	D.Fac	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1112.069	55.53	59.49	24.62	3.02	41.02	0.57	42.72	46.68	53.90	73.90	11.1	27.2	Hori.	100	136	31SH03	
2	1124.362	55.18	59.07	24.69	3.04	41.02	0.57	42.46	46.35	53.90	73.90	11.4	27.5	Hori.	100	90	31SH03	
3	1136.637	55.70	59.19	24.75	3.05	41.02	0.57	43.05	46.54	53.90	73.90	10.8	27.3	Hori.	100	125	31SH03	
4	1148.937	56.53	59.76	24.80	3.07	41.02	0.57	43.95	47.18	53.90	73.90	9.9	26.7	Hori.	100	126	31SH03	
5	1161.250	56.34	59.57	24.86	3.09	41.02	0.57	43.84	47.07	53.90	73.90	10.0	26.8	Hori.	100	128	31SH03	
6	1173.519	55.69	58.42	24.91	3.11	41.02	0.57	43.26	45.99	53.90	73.90	10.6	27.9	Hori.	100	127	31SH03	
7	1983.100	43.60	52.44	25.91	4.13	41.42	0.57	32.79	41.63	53.90	73.90	21.1	32.2	Hori.	106	174	31SH03	
8	5999.965	42.26	51.76	33.08	7.40	43.36	0.57	39.95	49.45	53.90	73.90	13.9	24.4	Hori.	100	214	31SH03	
9	1124.383	53.49	57.82	24.69	3.04	41.02	0.57	40.77	45.10	53.90	73.90	13.1	28.8	Vert.	125	183	31SH03	
10	1136.665	52.88	57.48	24.75	3.05	41.02	0.57	40.23	44.83	53.90	73.90	13.6	29.0	Vert.	119	183	31SH03	
11	5999.965	44.07	52.71	33.08	7.40	43.36	0.57	41.76	50.40	53.90	73.90	12.1	23.5	Vert.	117	178	31SH03	

Calculation : Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

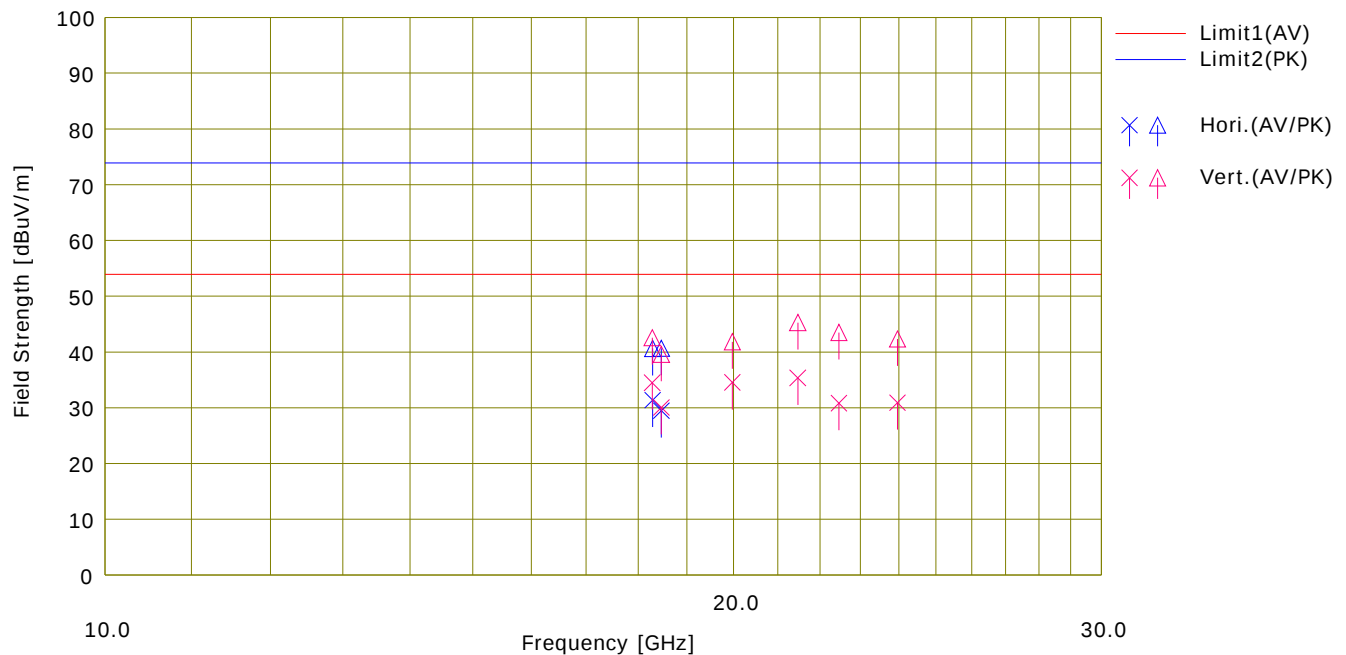
Date : 2024/11/15

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDC_DCV_HWC_076
 Remarks : Test Distance = 100 cm, Main port, Other

Mode : FM Receiving (97.9 MHz)_analog
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 23 deg.C / 38 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Naoki Saga



No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	18290.700	35.59	44.88	39.99	13.47	48.15	-9.54	31.36	40.65	53.90	73.90	22.5	33.2	Hori.	100	201	SHA04	
2	18471.070	33.63	44.83	40.07	13.52	48.21	-9.54	29.47	40.67	53.90	73.90	24.4	33.2	Hori.	100	209	SHA04	
3	18282.900	38.73	46.79	39.98	13.47	48.15	-9.54	34.49	42.55	53.90	73.90	19.4	31.3	Vert.	100	182	SHA04	
4	18471.080	34.19	43.74	40.07	13.52	48.21	-9.54	30.03	39.58	53.90	73.90	23.8	34.3	Vert.	100	217	SHA04	
5	19968.710	36.91	44.19	40.15	14.15	47.13	-9.54	34.54	41.82	53.90	73.90	19.3	32.0	Vert.	107	354	SHA04	
6	21466.330	36.95	46.85	40.13	14.84	47.03	-9.54	35.35	45.25	53.90	73.90	18.5	28.6	Vert.	109	359	SHA04	
7	22464.880	32.24	44.94	40.26	15.15	47.32	-9.54	30.79	43.49	53.90	73.90	23.1	30.4	Vert.	100	5	SHA04	
8	23962.510	31.42	42.84	40.07	15.67	46.73	-9.54	30.89	42.31	53.90	73.90	23.0	31.5	Vert.	109	347	SHA04	

Calculation : Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/14

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Test Distance = 320 cm, Main port, Local

Mode : FM Receiving (87.75 MHz)_analog
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< AV/PK DATA >>

No.	Freq.	Reading		Ant.Fac	Loss	Gain	D.Fac	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1212.640	34.90	49.93	25.07	3.16	41.02	0.57	22.68	37.71	53.90	73.90	31.2	36.1	Hori.	100	196	31SH03	
2	1763.840	38.53	52.04	25.13	3.86	41.25	0.57	26.84	40.35	53.90	73.90	27.0	33.5	Hori.	100	230	31SH03	
3	2204.800	34.71	49.46	27.95	4.39	41.50	0.57	26.12	40.87	53.90	73.90	27.7	33.0	Hori.	100	214	31SH03	
4	3748.160	35.09	49.28	29.26	5.87	42.18	0.57	28.61	42.80	53.90	73.90	25.2	31.1	Hori.	180	158	31SH03	
5	4189.120	34.86	48.87	29.75	6.20	42.48	0.57	28.90	42.91	53.90	73.90	25.0	30.9	Hori.	100	0	31SH03	
6	4409.600	36.73	48.92	30.21	6.38	42.73	0.57	31.16	43.35	53.90	73.90	22.7	30.5	Hori.	100	217	31SH03	
7	5291.520	34.86	49.04	31.53	6.97	43.15	0.57	30.78	44.96	53.90	73.90	23.1	28.9	Hori.	100	0	31SH03	
8	1212.640	34.69	50.57	25.07	3.16	41.02	0.57	22.47	38.35	53.90	73.90	31.4	35.5	Vert.	169	210	31SH03	
9	1763.840	36.18	51.68	25.13	3.86	41.25	0.57	24.49	39.99	53.90	73.90	29.4	33.9	Vert.	182	217	31SH03	
10	2204.800	34.79	49.00	27.95	4.39	41.50	0.57	26.20	40.41	53.90	73.90	27.7	33.4	Vert.	126	184	31SH03	
11	3748.160	35.73	50.11	29.26	5.87	42.18	0.57	29.25	43.63	53.90	73.90	24.6	30.2	Vert.	175	177	31SH03	
12	4189.120	34.65	49.44	29.75	6.20	42.48	0.57	28.69	43.48	53.90	73.90	25.2	30.4	Vert.	100	0	31SH03	
13	4409.600	36.64	49.19	30.21	6.38	42.73	0.57	31.07	43.62	53.90	73.90	22.8	30.2	Vert.	108	190	31SH03	
14	5291.520	34.75	48.70	31.53	6.97	43.15	0.57	30.67	44.62	53.90	73.90	23.2	29.2	Vert.	100	0	31SH03	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/14

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Test Distance = 320 cm, Main port, Local

Mode : FM Receiving (97.9 MHz)_analog
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< AV/PK DATA >>

No.	Freq.	Reading		Ant.Fac	Loss	Gain	D.Fac	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1212.640	35.44	50.51	25.07	3.16	41.02	0.57	23.22	38.29	53.90	73.90	30.6	35.6	Hori.	100	228	31SH03	
2	1763.840	36.67	49.93	25.13	3.86	41.25	0.57	24.98	38.24	53.90	73.90	28.9	35.6	Hori.	100	220	31SH03	
3	2204.800	34.93	48.51	27.95	4.39	41.50	0.57	26.34	39.92	53.90	73.90	27.5	33.9	Hori.	100	218	31SH03	
4	3748.160	35.43	49.77	29.26	5.87	42.18	0.57	28.95	43.29	53.90	73.90	24.9	30.6	Hori.	100	172	31SH03	
5	4189.120	34.73	48.95	29.75	6.20	42.48	0.57	28.77	42.99	53.90	73.90	25.1	30.9	Hori.	100	0	31SH03	
6	4409.600	37.31	49.09	30.21	6.38	42.73	0.57	31.74	43.52	53.90	73.90	22.1	30.3	Hori.	100	215	31SH03	
7	5291.520	34.78	50.15	31.53	6.97	43.15	0.57	30.70	46.07	53.90	73.90	23.2	27.8	Hori.	100	0	31SH03	
8	1212.640	33.90	48.05	25.07	3.16	41.02	0.57	21.68	35.83	53.90	73.90	32.2	38.0	Vert.	100	0	31SH03	
9	1763.840	36.19	50.40	25.13	3.86	41.25	0.57	24.50	38.71	53.90	73.90	29.4	35.1	Vert.	180	217	31SH03	
10	2204.800	33.86	49.08	27.95	4.39	41.50	0.57	25.27	40.49	53.90	73.90	28.6	33.4	Vert.	100	184	31SH03	
11	3748.160	35.80	49.97	29.26	5.87	42.18	0.57	29.32	43.49	53.90	73.90	24.5	30.4	Vert.	171	178	31SH03	
12	4189.120	34.67	49.02	29.75	6.20	42.48	0.57	28.71	43.06	53.90	73.90	25.1	30.8	Vert.	100	0	31SH03	
13	4409.600	36.76	48.68	30.21	6.38	42.73	0.57	31.19	43.11	53.90	73.90	22.7	30.7	Vert.	110	190	31SH03	
14	5291.520	34.82	48.65	31.53	6.97	43.15	0.57	30.74	44.57	53.90	73.90	23.1	29.3	Vert.	100	0	31SH03	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/14

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MDCD_DCV_HWC_076
 Remarks : Test Distance = 320 cm, Main port, Local

Mode : FM Receiving (107.9 MHz)_analog
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< AV/PK DATA >>

No.	Freq.	Reading		Ant.Fac	Loss	Gain	D.Fac	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1212.640	34.48	48.81	25.07	3.16	41.02	0.57	22.26	36.59	53.90	73.90	31.6	37.3	Hori.	100	190	31SH03	
2	1763.840	37.97	52.27	25.13	3.86	41.25	0.57	26.28	40.58	53.90	73.90	27.6	33.3	Hori.	100	233	31SH03	
3	2204.800	35.22	49.83	27.95	4.39	41.50	0.57	26.63	41.24	53.90	73.90	27.2	32.6	Hori.	100	221	31SH03	
4	3748.160	35.25	49.85	29.26	5.87	42.18	0.57	28.77	43.37	53.90	73.90	25.1	30.5	Hori.	188	204	31SH03	
5	4189.120	34.73	49.06	29.75	6.20	42.48	0.57	28.77	43.10	53.90	73.90	25.1	30.8	Hori.	100	0	31SH03	
6	4409.600	36.91	50.04	30.21	6.38	42.73	0.57	31.34	44.47	53.90	73.90	22.5	29.4	Hori.	100	215	31SH03	
7	5291.520	34.85	48.76	31.53	6.97	43.15	0.57	30.77	44.68	53.90	73.90	23.1	29.2	Hori.	100	0	31SH03	
8	1212.640	34.89	49.53	25.07	3.16	41.02	0.57	22.67	37.31	53.90	73.90	31.2	36.5	Vert.	177	215	31SH03	
9	1763.840	36.10	51.14	25.13	3.86	41.25	0.57	24.41	39.45	53.90	73.90	29.4	34.4	Vert.	196	216	31SH03	
10	2204.800	34.60	48.16	27.95	4.39	41.50	0.57	26.01	39.57	53.90	73.90	27.8	34.3	Vert.	120	182	31SH03	
11	3748.160	35.31	49.91	29.26	5.87	42.18	0.57	28.83	43.43	53.90	73.90	25.0	30.4	Vert.	174	179	31SH03	
12	4189.120	34.69	49.16	29.75	6.20	42.48	0.57	28.73	43.20	53.90	73.90	25.1	30.7	Vert.	100	0	31SH03	
13	4409.600	36.75	50.07	30.21	6.38	42.73	0.57	31.18	44.50	53.90	73.90	22.7	29.4	Vert.	104	196	31SH03	
14	5291.520	34.89	48.83	31.53	6.97	43.15	0.57	30.81	44.75	53.90	73.90	23.0	29.1	Vert.	100	0	31SH03	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

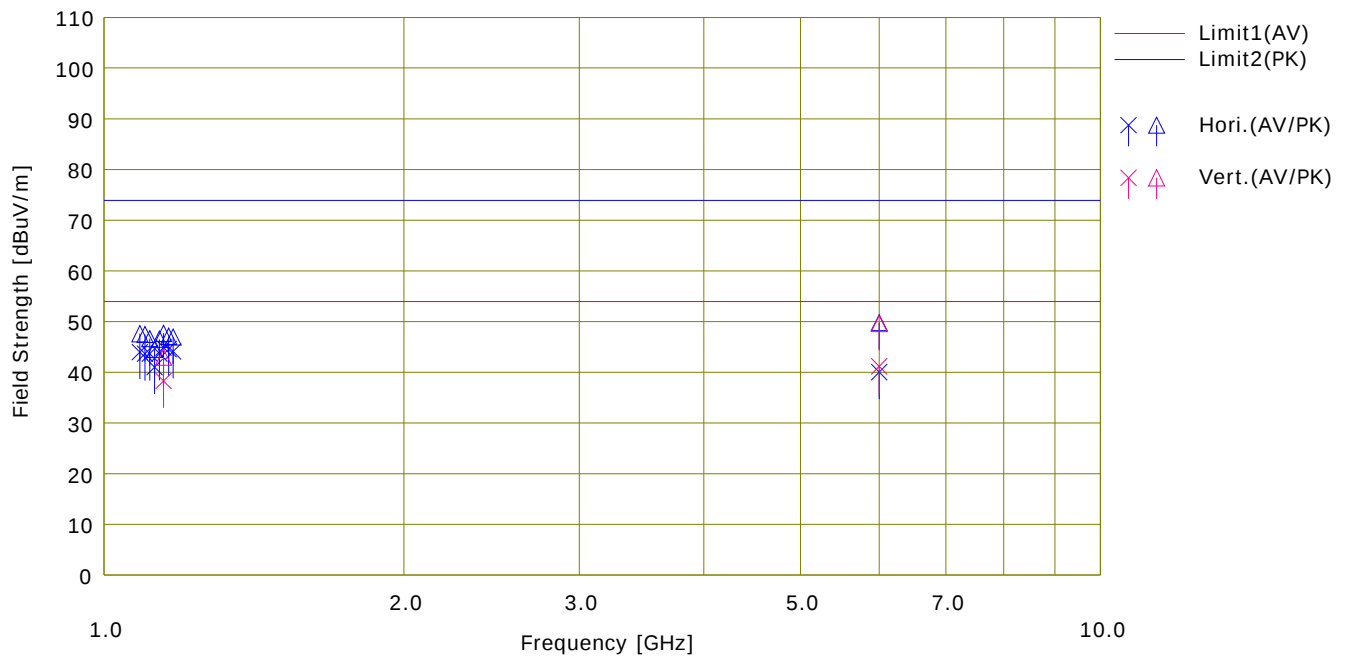
Date : 2024/11/14

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDL_DCV_HWC_076
 Remarks : Test Distance = 320 cm, Main port, Other

Mode : FM Receiving (97.9 MHz)_digital
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba



No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1086.360	56.90	60.55	24.53	2.98	41.02	0.57	43.96	47.61	53.90	73.90	9.9	26.2	Hori.	100	140	31SH03	
2	1099.774	56.53	60.32	24.57	3.01	41.02	0.57	43.66	47.45	53.90	73.90	10.2	26.4	Hori.	100	138	31SH03	
3	1112.099	56.49	59.43	24.62	3.02	41.02	0.57	43.68	46.62	53.90	73.90	10.2	27.2	Hori.	100	144	31SH03	
4	1124.387	53.73	57.19	24.69	3.04	41.02	0.57	41.01	44.47	53.90	73.90	12.8	29.4	Hori.	100	90	31SH03	
5	1136.634	56.40	59.17	24.75	3.05	41.02	0.57	43.75	46.52	53.90	73.90	10.1	27.3	Hori.	100	127	31SH03	
6	1147.600	57.49	60.24	24.79	3.07	41.02	0.57	44.90	47.65	53.90	73.90	9.0	26.2	Hori.	100	125	31SH03	
7	1161.259	57.05	59.57	24.86	3.09	41.02	0.57	44.55	47.07	53.90	73.90	9.3	26.8	Hori.	100	127	31SH03	
8	1173.525	56.51	59.36	24.91	3.11	41.02	0.57	44.08	46.93	53.90	73.90	9.8	26.9	Hori.	100	127	31SH03	
9	5999.920	42.34	52.08	33.08	7.40	43.36	0.57	40.03	49.77	53.90	73.90	13.8	24.1	Hori.	100	232	31SH03	
10	1147.596	50.87	55.54	24.79	3.07	41.02	0.57	38.28	42.95	53.90	73.90	15.6	30.9	Vert.	121	187	31SH03	
11	6000.006	43.48	51.87	33.08	7.40	43.36	0.57	41.17	49.56	53.90	73.90	12.7	24.3	Vert.	149	179	31SH03	

Calculation : Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

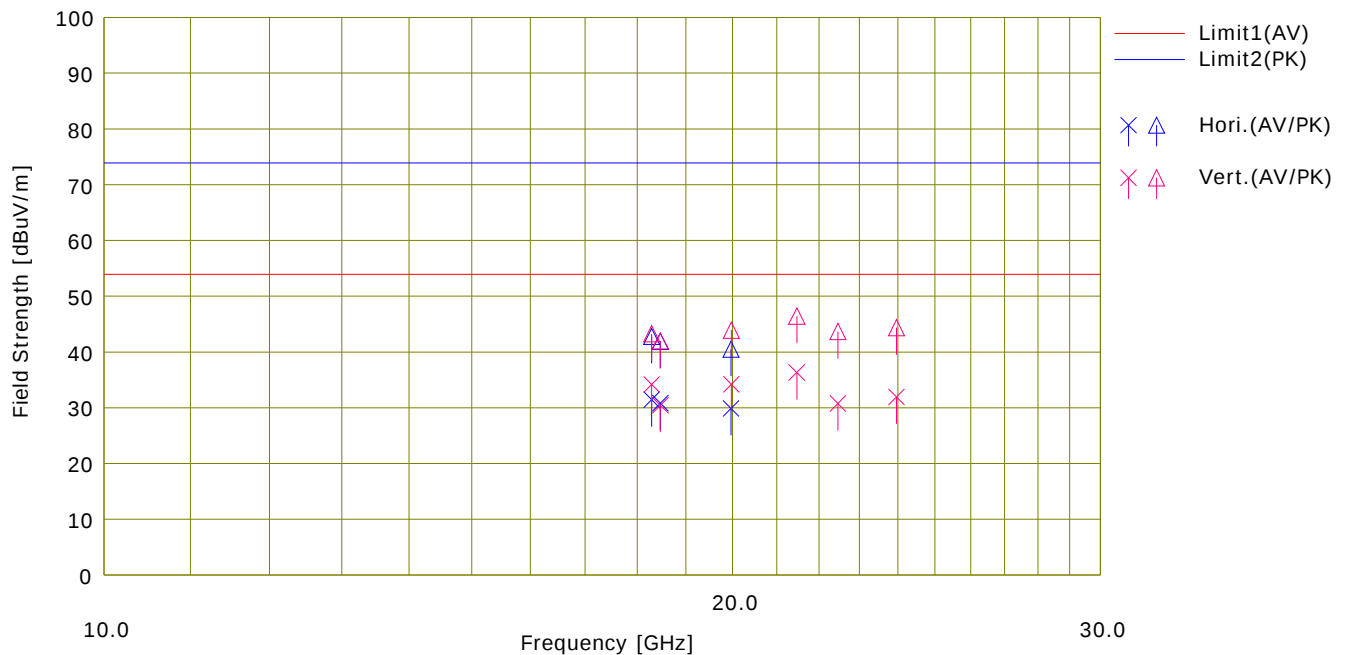
Date : 2024/11/15

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MCDC_DCV_HWC_076
 Remarks : Test Distance = 100 cm, Main port, Other

Mode : FM Receiving (97.9 MHz)_digital
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 23 deg.C / 38 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Naoki Saga



No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	18290.780	35.66	47.01	39.99	13.47	48.15	-9.54	31.43	42.78	53.90	73.90	22.4	31.1	Hori.	100	202	SHA04	
2	18470.940	34.98	46.03	40.07	13.52	48.21	-9.54	30.82	41.87	53.90	73.90	23.0	32.0	Hori.	100	199	SHA04	
3	19968.020	32.22	42.83	40.15	14.15	47.13	-9.54	29.85	40.46	53.90	73.90	24.0	33.4	Hori.	100	0	SHA04	
4	18290.810	38.38	47.48	39.99	13.47	48.15	-9.54	34.15	43.25	53.90	73.90	19.7	30.6	Vert.	101	183	SHA04	
5	18471.080	34.60	46.14	40.07	13.52	48.21	-9.54	30.44	41.98	53.90	73.90	23.4	31.9	Vert.	100	217	SHA04	
6	19968.740	36.59	46.28	40.15	14.15	47.13	-9.54	34.22	43.91	53.90	73.90	19.6	29.9	Vert.	107	355	SHA04	
7	21466.380	37.93	48.03	40.13	14.84	47.03	-9.54	36.33	46.43	53.90	73.90	17.5	27.4	Vert.	106	1	SHA04	
8	22464.740	32.20	45.11	40.26	15.15	47.32	-9.54	30.75	43.66	53.90	73.90	23.1	30.2	Vert.	107	12	SHA04	
9	23962.470	32.47	44.90	40.07	15.67	46.73	-9.54	31.94	44.37	53.90	73.90	21.9	29.5	Vert.	111	16	SHA04	

Calculation : Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/14

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MDCD_DCV_HWC_076
 Remarks : Test Distance = 320 cm, Main port, Local

Mode : FM Receiving (87.75 MHz)_digital
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< AV/PK DATA >>

No.	Freq.	Reading		Ant.Fac	Loss	Gain	D.Fac	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1212.640	34.72	49.23	25.07	3.16	41.02	0.57	22.50	37.01	53.90	73.90	31.4	36.8	Hori.	100	186	31SH03	
2	1763.840	38.03	52.20	25.13	3.86	41.25	0.57	26.34	40.51	53.90	73.90	27.5	33.3	Hori.	100	224	31SH03	
3	2204.800	35.14	49.15	27.95	4.39	41.50	0.57	26.55	40.56	53.90	73.90	27.3	33.3	Hori.	100	217	31SH03	
4	3748.160	35.11	48.95	29.26	5.87	42.18	0.57	28.63	42.47	53.90	73.90	25.2	31.4	Hori.	221	216	31SH03	
5	4189.120	34.67	49.04	29.75	6.20	42.48	0.57	28.71	43.08	53.90	73.90	25.1	30.8	Hori.	100	0	31SH03	
6	4409.600	37.05	51.02	30.21	6.38	42.73	0.57	31.48	45.45	53.90	73.90	22.4	28.4	Hori.	100	221	31SH03	
7	5291.520	34.82	48.71	31.53	6.97	43.15	0.57	30.74	44.63	53.90	73.90	23.1	29.2	Hori.	100	0	31SH03	
8	1212.640	36.33	52.97	25.07	3.16	41.02	0.57	24.11	40.75	53.90	73.90	29.7	33.1	Vert.	170	227	31SH03	
9	1763.840	37.63	55.11	25.13	3.86	41.25	0.57	25.94	43.42	53.90	73.90	27.9	30.4	Vert.	196	218	31SH03	
10	2204.800	34.83	49.68	27.95	4.39	41.50	0.57	26.24	41.09	53.90	73.90	27.6	32.8	Vert.	167	211	31SH03	
11	3748.160	36.17	50.41	29.26	5.87	42.18	0.57	29.69	43.93	53.90	73.90	24.2	29.9	Vert.	197	179	31SH03	
12	4189.120	34.65	48.42	29.75	6.20	42.48	0.57	28.69	42.46	53.90	73.90	25.2	31.4	Vert.	100	0	31SH03	
13	4409.600	36.29	49.91	30.21	6.38	42.73	0.57	30.72	44.34	53.90	73.90	23.1	29.5	Vert.	106	199	31SH03	
14	5291.520	34.84	49.36	31.53	6.97	43.15	0.57	30.76	45.28	53.90	73.90	23.1	28.6	Vert.	100	0	31SH03	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/14

Company : Panasonic Corporation
 Kind of EUT : AV Control Unit
 Model No. : AM2301
 Serial No. : MDCD_DCV_HWC_076
 Remarks : Test Distance = 320 cm, Main port, Local

Mode : FM Receiving (97.9 MHz)_digital
 Order No. : 15263628
 Power : DC 13.2 V
 Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< AV/PK DATA >>

No.	Freq.	Reading		Ant.Fac	Loss	Gain	D.Fac	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1212.640	35.34	50.31	25.07	3.16	41.02	0.57	23.12	38.09	53.90	73.90	30.7	35.8	Hori.	135	230	31SH03	
2	1763.840	38.35	52.46	25.13	3.86	41.25	0.57	26.66	40.77	53.90	73.90	27.2	33.1	Hori.	100	229	31SH03	
3	2204.800	35.28	49.38	27.95	4.39	41.50	0.57	26.69	40.79	53.90	73.90	27.2	33.1	Hori.	185	219	31SH03	
4	3748.160	35.05	48.92	29.26	5.87	42.18	0.57	28.57	42.44	53.90	73.90	25.3	31.4	Hori.	221	216	31SH03	
5	4189.120	34.69	48.64	29.75	6.20	42.48	0.57	28.73	42.68	53.90	73.90	25.1	31.2	Hori.	100	0	31SH03	
6	4409.600	36.83	50.25	30.21	6.38	42.73	0.57	31.26	44.68	53.90	73.90	22.6	29.2	Hori.	100	221	31SH03	
7	5291.520	34.84	48.82	31.53	6.97	43.15	0.57	30.76	44.74	53.90	73.90	23.1	29.1	Hori.	100	0	31SH03	
8	1212.640	34.92	48.97	25.07	3.16	41.02	0.57	22.70	36.75	53.90	73.90	31.2	37.1	Vert.	171	198	31SH03	
9	1763.840	36.37	50.07	25.13	3.86	41.25	0.57	24.68	38.38	53.90	73.90	29.2	35.5	Vert.	195	215	31SH03	
10	2204.800	34.60	49.54	27.95	4.39	41.50	0.57	26.01	40.95	53.90	73.90	27.8	32.9	Vert.	168	210	31SH03	
11	3748.160	35.69	50.20	29.26	5.87	42.18	0.57	29.21	43.72	53.90	73.90	24.6	30.1	Vert.	197	179	31SH03	
12	4189.120	34.55	48.70	29.75	6.20	42.48	0.57	28.59	42.74	53.90	73.90	25.3	31.1	Vert.	100	0	31SH03	
13	4409.600	36.62	49.85	30.21	6.38	42.73	0.57	31.05	44.28	53.90	73.90	22.8	29.6	Vert.	104	199	31SH03	
14	5291.520	34.87	48.78	31.53	6.97	43.15	0.57	30.79	44.70	53.90	73.90	23.1	29.2	Vert.	100	0	31SH03	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber

Date : 2024/11/14

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076
Remarks : Test Distance = 320 cm, Main port, Local

Mode : FM Receiving (107.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 26 deg.C / 29 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Yuta Shiba

<< AV/PK DATA >>

No.	Freq.	Reading		Ant.Fac	Loss	Gain	D.Fac	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1212.640	34.46	48.78	25.07	3.16	41.02	0.57	22.24	36.56	53.90	73.90	31.6	37.3	Hori.	100	186	31SH03	
2	1763.840	37.48	52.61	25.13	3.86	41.25	0.57	25.79	40.92	53.90	73.90	28.1	32.9	Hori.	100	230	31SH03	
3	2204.800	35.20	49.94	27.95	4.39	41.50	0.57	26.61	41.35	53.90	73.90	27.2	32.5	Hori.	100	217	31SH03	
4	3748.160	34.84	49.56	29.26	5.87	42.18	0.57	28.36	43.08	53.90	73.90	25.5	30.8	Hori.	198	214	31SH03	
5	4189.120	34.60	49.76	29.75	6.20	42.48	0.57	28.64	43.80	53.90	73.90	25.2	30.1	Hori.	100	0	31SH03	
6	4409.600	36.78	49.75	30.21	6.38	42.73	0.57	31.21	44.18	53.90	73.90	22.6	29.7	Hori.	100	221	31SH03	
7	5291.520	34.89	48.67	31.53	6.97	43.15	0.57	30.81	44.59	53.90	73.90	23.0	29.3	Hori.	100	0	31SH03	
8	1212.640	34.77	48.49	25.07	3.16	41.02	0.57	22.55	36.27	53.90	73.90	31.3	37.6	Vert.	174	212	31SH03	
9	1763.840	36.37	50.38	25.13	3.86	41.25	0.57	24.68	38.69	53.90	73.90	29.2	35.2	Vert.	190	216	31SH03	
10	2204.800	34.64	49.57	27.95	4.39	41.50	0.57	26.05	40.98	53.90	73.90	27.8	32.9	Vert.	112	182	31SH03	
11	3748.160	35.44	49.29	29.26	5.87	42.18	0.57	28.96	42.81	53.90	73.90	24.9	31.0	Vert.	163	185	31SH03	
12	4189.120	34.46	48.91	29.75	6.20	42.48	0.57	28.50	42.95	53.90	73.90	25.4	30.9	Vert.	100	0	31SH03	
13	4409.600	36.69	49.90	30.21	6.38	42.73	0.57	31.12	44.33	53.90	73.90	22.7	29.5	Vert.	107	197	31SH03	
14	5291.520	34.75	49.21	31.53	6.97	43.15	0.57	30.67	45.13	53.90	73.90	23.2	28.7	Vert.	100	0	31SH03	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna **SH*: Horn Antenna

DATA OF ANTENNA TERMINAL TEST

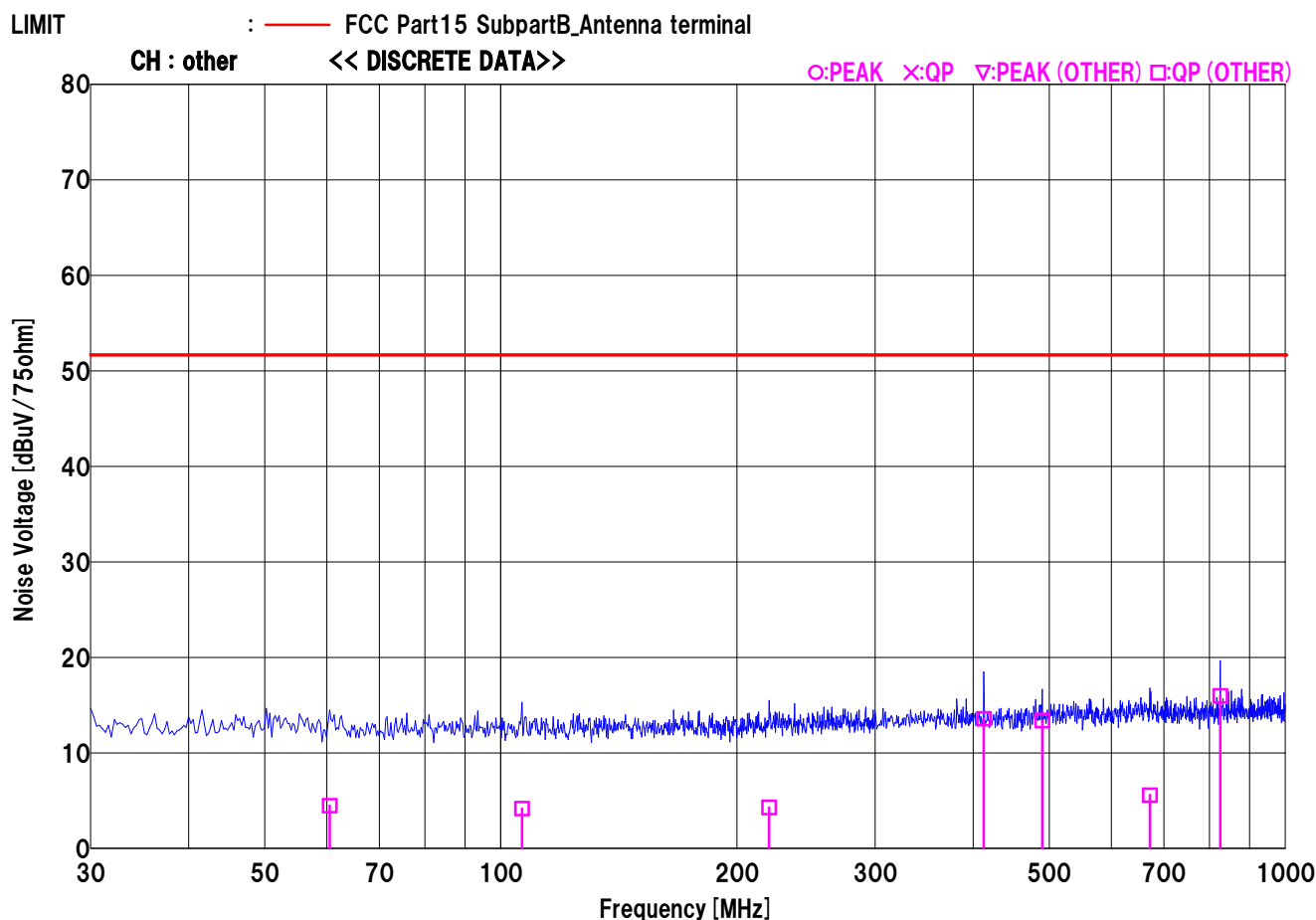
UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MDCD_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*60.510	----	17.7	-13.2	----	4.5	51.7	47.2
	*106.410	----	17.3	-13.1	----	4.2	51.7	47.5
	*219.811	----	17.2	-12.9	----	4.3	51.7	47.4
	*412.702	----	26.1	-12.5	----	13.6	51.7	38.1
	*489.703	----	25.7	-12.3	----	13.4	51.7	38.3
	*671.707	----	17.5	-11.9	----	5.6	51.7	46.1
	*825.709	----	27.8	-11.8	----	16.0	51.7	35.7

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (87.75 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
87.75 MHz	110.240	----	17.0	-13.1	----	3.9	51.7	47.8
	220.480	----	18.8	-12.8	----	6.0	51.7	45.7
	330.720	----	18.8	-12.6	----	6.2	51.7	45.5
	440.960	----	18.8	-12.4	----	6.4	51.7	45.3
	551.200	----	17.1	-12.1	----	5.0	51.7	46.7
	661.440	----	17.3	-11.9	----	5.4	51.7	46.3
	771.680	----	17.2	-11.8	----	5.4	51.7	46.3
	881.920	----	17.5	-11.9	----	5.6	51.7	46.1
	992.160	----	17.3	-11.9	----	5.4	51.7	46.3

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
87.75 MHz	110.240	----	17.0	-13.1	----	3.9	51.7	47.8
	220.480	----	18.8	-12.8	----	6.0	51.7	45.7
	330.720	----	18.8	-12.6	----	6.2	51.7	45.5
	440.960	----	18.9	-12.4	----	6.5	51.7	45.2
	551.200	----	17.1	-12.1	----	5.0	51.7	46.7
	661.440	----	17.3	-11.9	----	5.4	51.7	46.3
	771.680	----	17.2	-11.8	----	5.4	51.7	46.3
	881.920	----	17.5	-11.9	----	5.6	51.7	46.1
	992.160	----	17.3	-11.9	----	5.4	51.7	46.3

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (107.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
107.9 MHz	110.240	----	17.1	-13.1	----	4.0	51.7	47.7
	220.480	----	18.8	-12.8	----	6.0	51.7	45.7
	330.720	----	18.8	-12.6	----	6.2	51.7	45.5
	440.960	----	18.9	-12.4	----	6.5	51.7	45.2
	551.200	----	17.1	-12.1	----	5.0	51.7	46.7
	661.440	----	17.3	-11.9	----	5.4	51.7	46.3
	771.680	----	17.3	-11.8	----	5.5	51.7	46.2
	881.920	----	17.5	-11.9	----	5.6	51.7	46.1
	992.160	----	17.3	-11.9	----	5.4	51.7	46.3

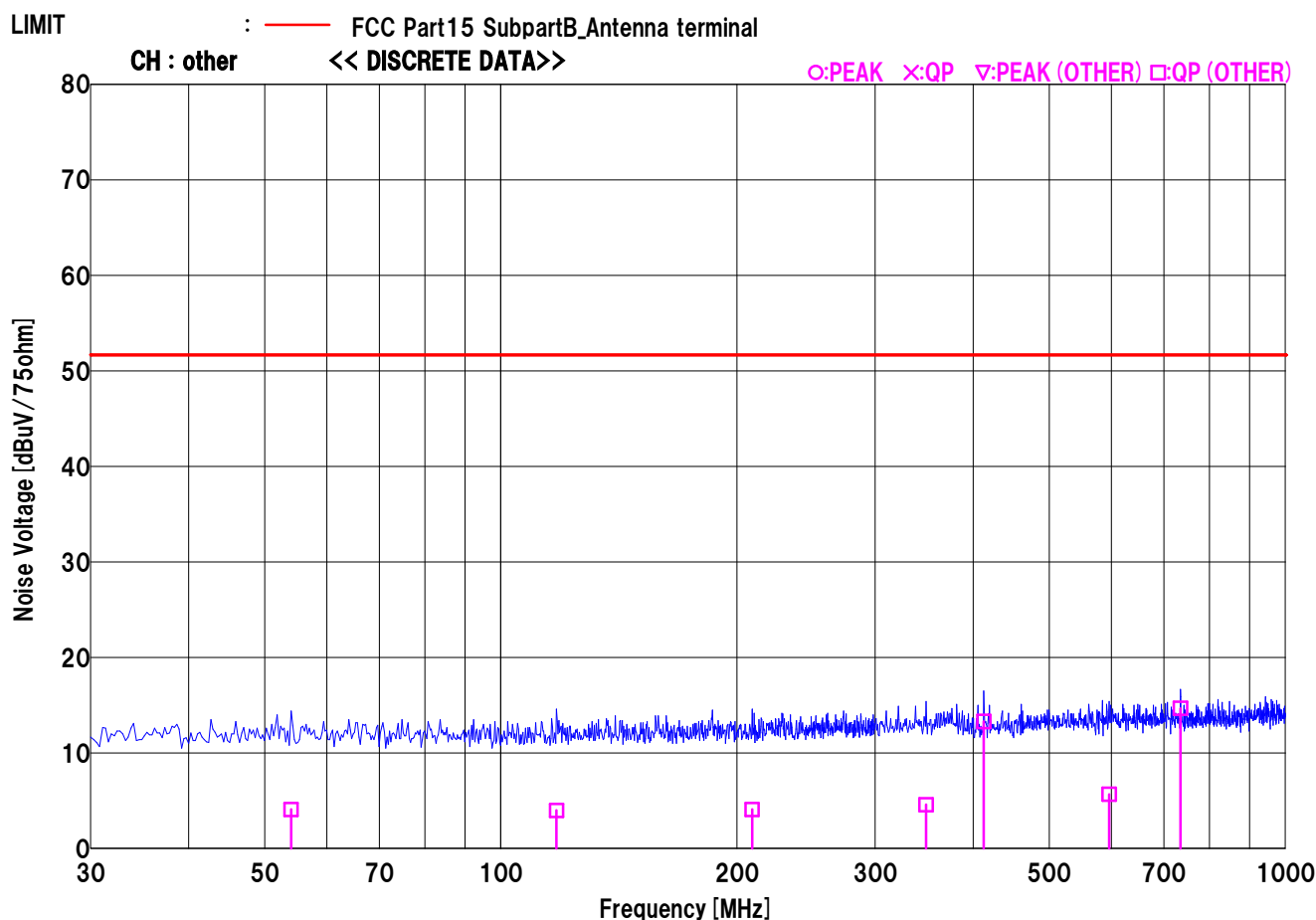
Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MDCD_DCV_HWC_076Mode : FM Receiving (97.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*54.030	----	17.3	-13.2	----	4.1	51.7	47.6
	*117.749	----	17.1	-13.1	----	4.0	51.7	47.7
	*209.011	----	17.0	-12.9	----	4.1	51.7	47.6
	*348.301	----	17.1	-12.5	----	4.6	51.7	47.1
	*412.702	----	25.8	-12.5	----	13.3	51.7	38.4
	*596.105	----	17.7	-12.0	----	5.7	51.7	46.0
	*734.708	----	26.5	-11.8	----	14.7	51.7	37.0

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (87.75 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
87.75 MHz	110.240	----	17.0	-13.1	----	3.9	51.7	47.8
	220.480	----	18.3	-12.8	----	5.5	51.7	46.2
	330.720	----	18.1	-12.6	----	5.5	51.7	46.2
	440.960	----	18.3	-12.4	----	5.9	51.7	45.8
	551.200	----	17.0	-12.1	----	4.9	51.7	46.8
	661.440	----	17.2	-11.9	----	5.3	51.7	46.4
	771.680	----	17.3	-11.8	----	5.5	51.7	46.2
	881.920	----	17.6	-11.9	----	5.7	51.7	46.0
	992.160	----	17.5	-11.9	----	5.6	51.7	46.1

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
97.9 MHz	110.240	----	17.0	-13.1	----	3.9	51.7	47.8
	220.480	----	18.5	-12.8	----	5.7	51.7	46.0
	330.720	----	18.2	-12.6	----	5.6	51.7	46.1
	440.960	----	18.6	-12.4	----	6.2	51.7	45.5
	551.200	----	17.1	-12.1	----	5.0	51.7	46.7
	661.440	----	17.3	-11.9	----	5.4	51.7	46.3
	771.680	----	17.1	-11.8	----	5.3	51.7	46.4
	881.920	----	17.5	-11.9	----	5.6	51.7	46.1
	992.160	----	17.2	-11.9	----	5.3	51.7	46.4

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (107.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
107.9 MHz	110.240	----	17.0	-13.1	----	3.9	51.7	47.8
	220.480	----	18.2	-12.8	----	5.4	51.7	46.3
	330.720	----	18.3	-12.6	----	5.7	51.7	46.0
	440.960	----	18.5	-12.4	----	6.1	51.7	45.6
	551.200	----	17.0	-12.1	----	4.9	51.7	46.8
	661.440	----	17.3	-11.9	----	5.4	51.7	46.3
	771.680	----	17.3	-11.8	----	5.5	51.7	46.2
	881.920	----	17.6	-11.9	----	5.7	51.7	46.0
	992.160	----	17.3	-11.9	----	5.4	51.7	46.3

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDC_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

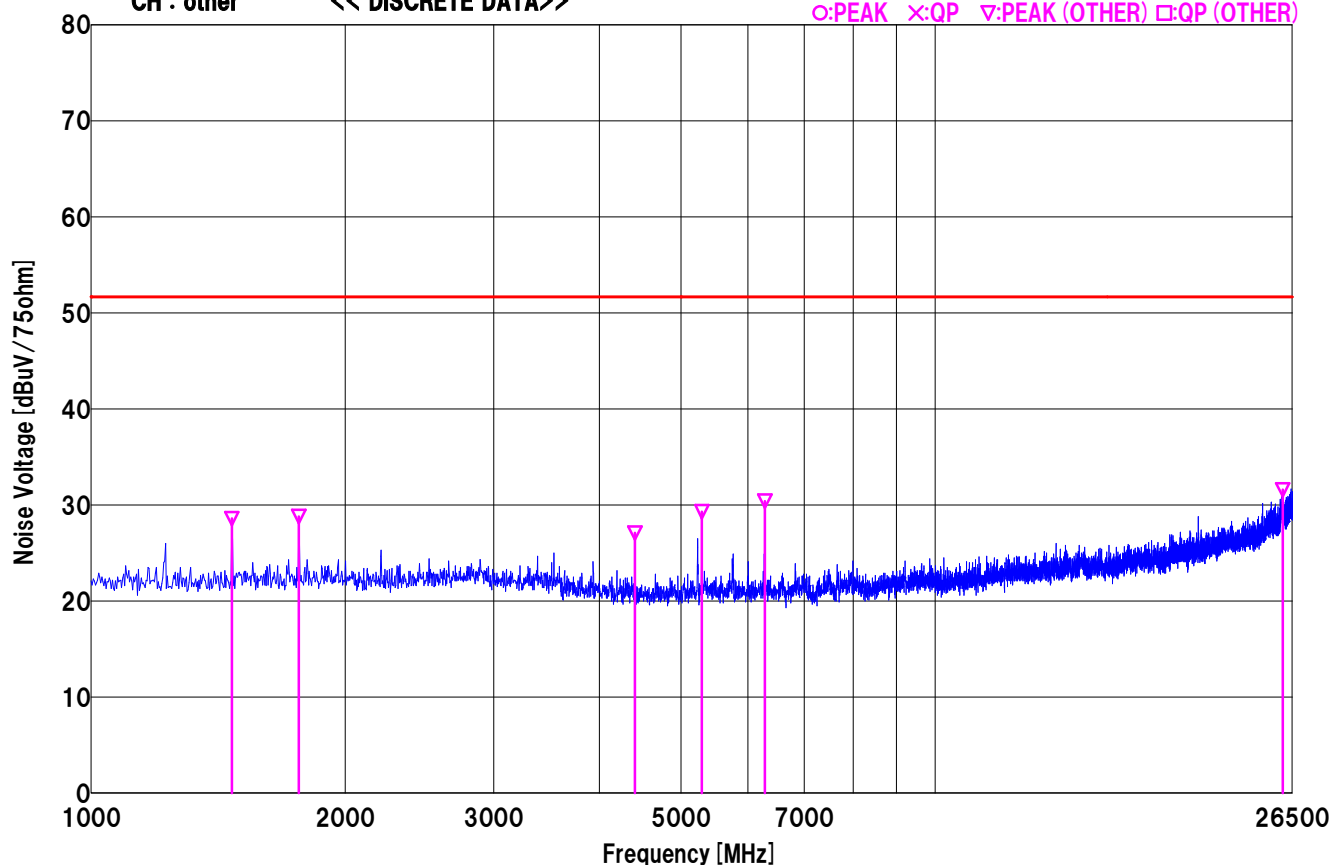
Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : — FCC Part15 SubpartB_Antenna terminal

CH : other << DISCRETE DATA >>

○:PEAK ×:QP ▽:PEAK (OTHER) □:QP (OTHER)



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

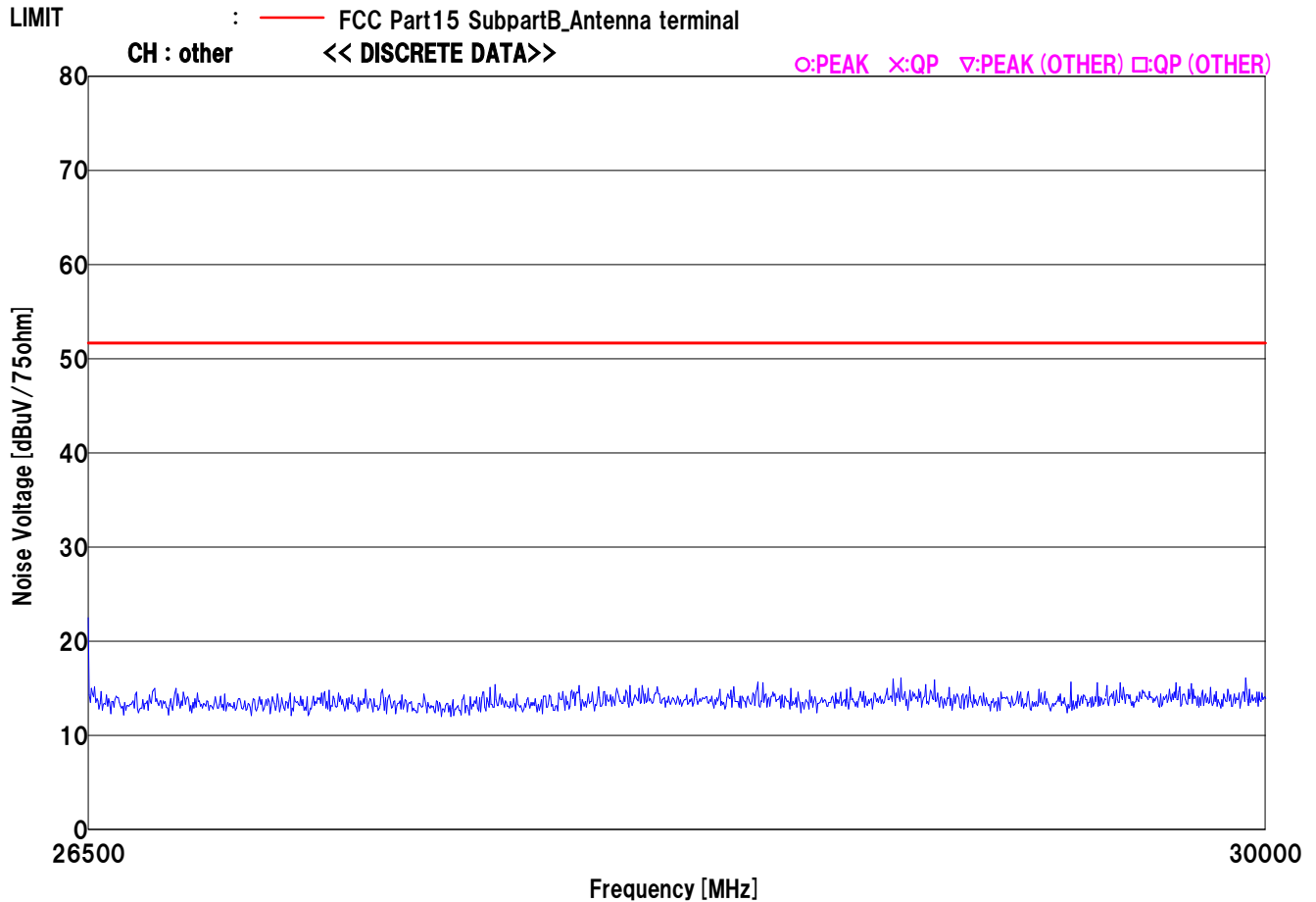
UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDC_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*1468.000	52.8	----	-24.2	28.6	----	51.7	23.1
	*1762.000	52.5	----	-23.7	28.8	----	51.7	22.9
	*4408.000	49.6	----	-22.5	27.1	----	51.7	24.6
	*5293.000	51.5	----	-22.2	29.3	----	51.7	22.4
	*6286.000	52.5	----	-22.1	30.4	----	51.7	21.3
	*25812.500	46.8	----	-15.2	31.6	----	51.7	20.1

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDLDCV_HWC_076

Mode : FM Receiving (87.75 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
87.75 MHz	1763.840	53.1	----	-23.7	29.4	----	51.7	22.3
	2204.800	50.7	----	-23.5	27.2	----	51.7	24.5
	4409.600	50.6	----	-22.5	28.1	----	51.7	23.6
	5291.520	52.2	----	-22.2	30.0	----	51.7	21.7

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
97.9 MHz	1212.640	52.5	----	-24.8	27.7	----	51.7	24.0
	1763.840	53.5	----	-23.7	29.8	----	51.7	21.9
	2204.800	50.4	----	-23.5	26.9	----	51.7	24.8
	4189.120	46.2	----	-22.7	23.5	----	51.7	28.3
	5291.520	51.7	----	-22.2	29.5	----	51.7	22.2

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (107.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
107.9 MHz	1763.840	53.5	----	-23.7	29.8	----	51.7	21.9
	2204.800	50.5	----	-23.5	27.0	----	51.7	24.7
	4409.600	50.8	----	-22.5	28.3	----	51.7	23.4
	5291.520	52.2	----	-22.2	30.0	----	51.7	21.7

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

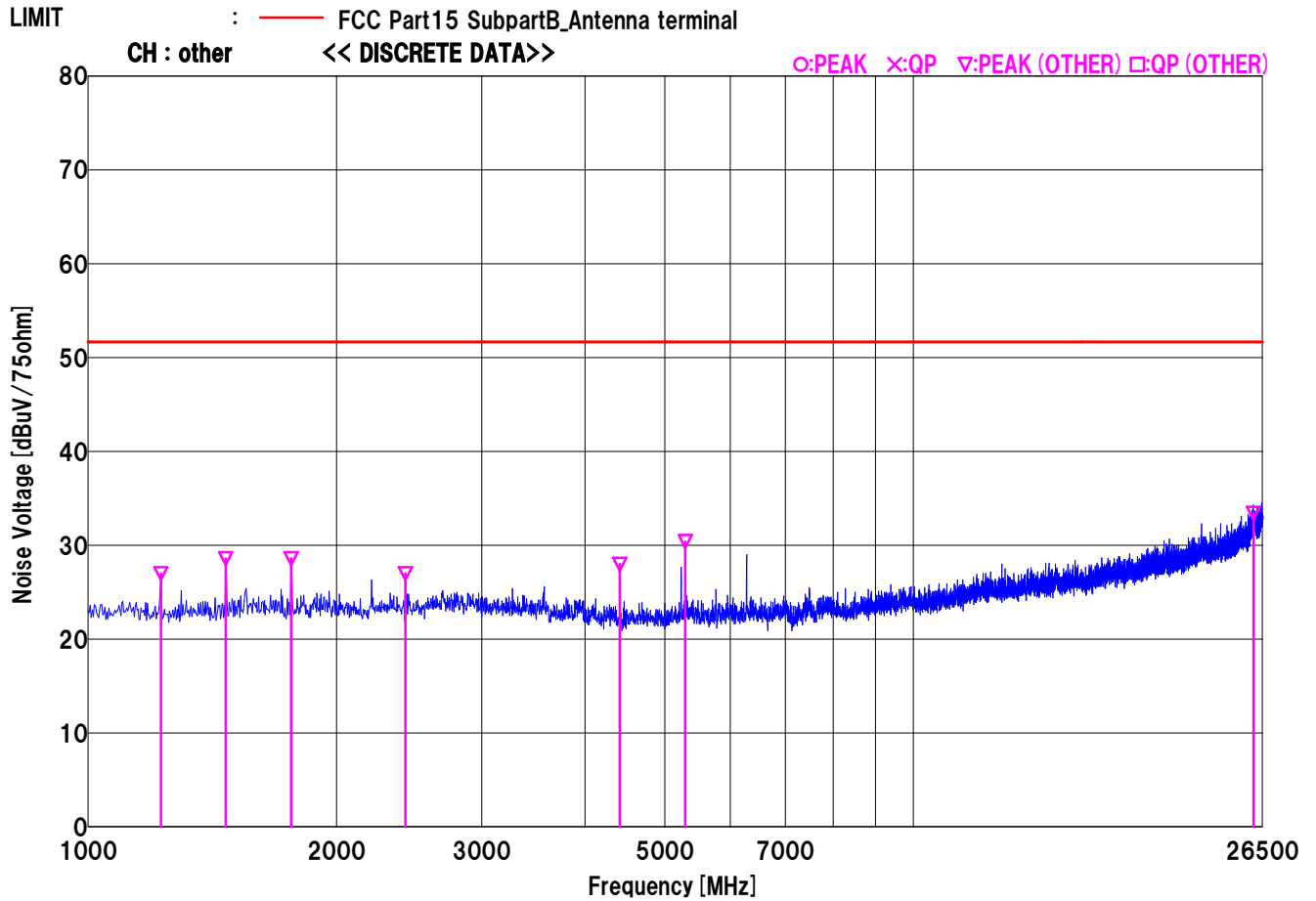
UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDC_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa



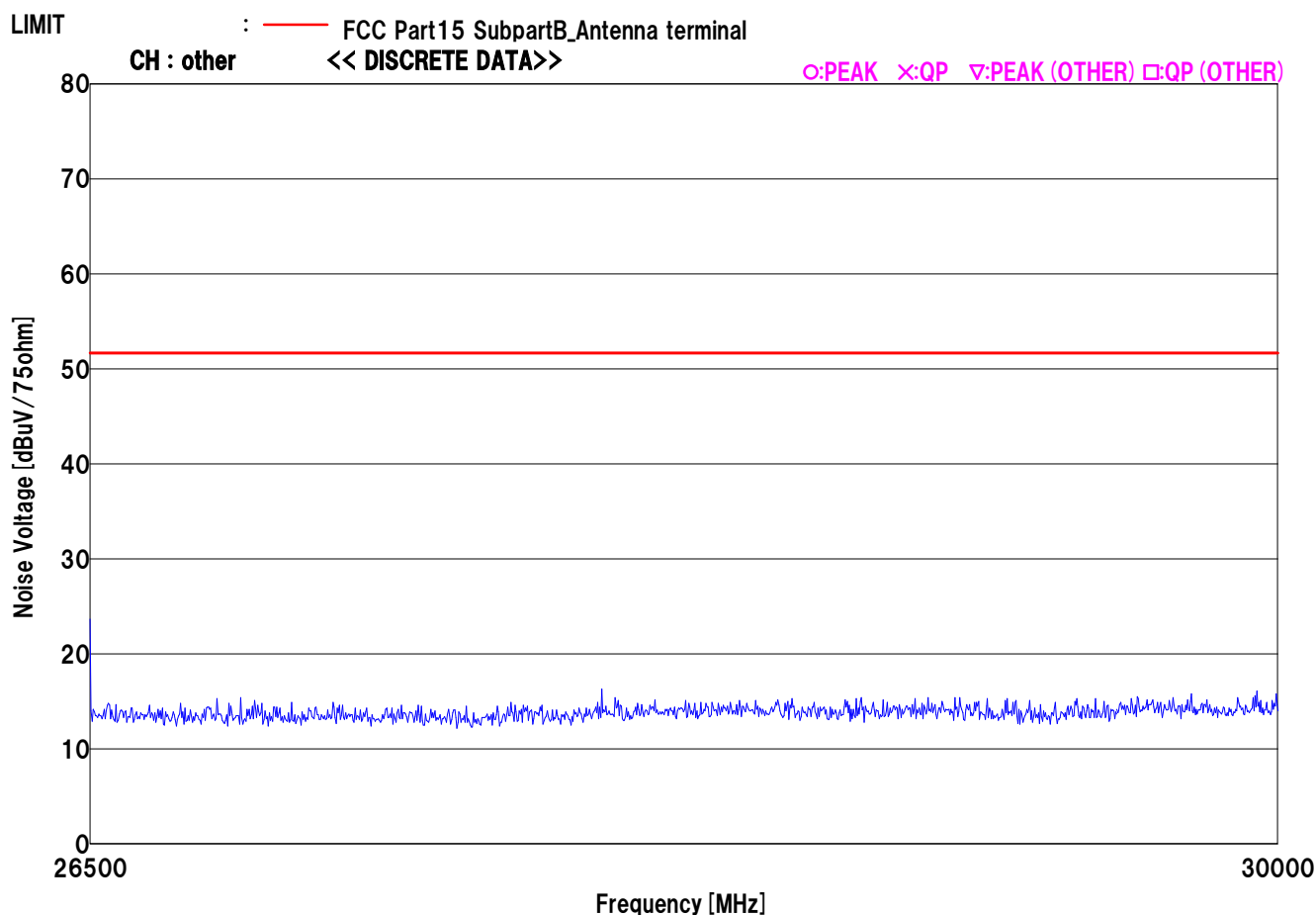
Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDC_DCV_HWC_076Mode : FM Receiving (97.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDG_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
other	*1225.000	51.1	----	-24.1	27.0	----	51.7	24.7
	*1468.000	52.1	----	-23.5	28.6	----	51.7	23.1
	*1762.000	51.5	----	-22.9	28.6	----	51.7	23.1
	*2425.000	49.4	----	-22.4	27.0	----	51.7	24.7
	*4408.000	49.3	----	-21.3	28.0	----	51.7	23.7
	*5293.000	51.1	----	-20.7	30.4	----	51.7	21.3
	*25837.500	45.5	----	-12.1	33.4	----	51.7	18.3

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (87.75 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
87.75 MHz	1763.840	52.7	----	-22.9	29.8	----	51.7	21.9
	2204.800	50.4	----	-22.5	27.9	----	51.7	23.9
	4409.600	50.6	----	-21.3	29.3	----	51.7	22.4
	5291.520	51.8	----	-20.7	31.1	----	51.7	20.6

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
97.9 MHz	1212.640	50.0	----	-24.1	25.9	----	51.7	25.8
	1763.840	53.5	----	-22.9	30.6	----	51.7	21.1
	2204.800	50.6	----	-22.5	28.1	----	51.7	23.6
	4189.120	50.8	----	-21.3	29.5	----	51.7	22.2
	5291.520	52.2	----	-20.7	31.5	----	51.7	20.2

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (107.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Main port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
107.9 MHz	1763.840	53.5	----	-22.9	30.6	----	51.7	21.1
	2204.800	50.5	----	-22.5	28.0	----	51.7	23.7
	4409.600	50.8	----	-21.3	29.5	----	51.7	22.2
	5291.520	52.0	----	-20.7	31.3	----	51.7	20.4

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

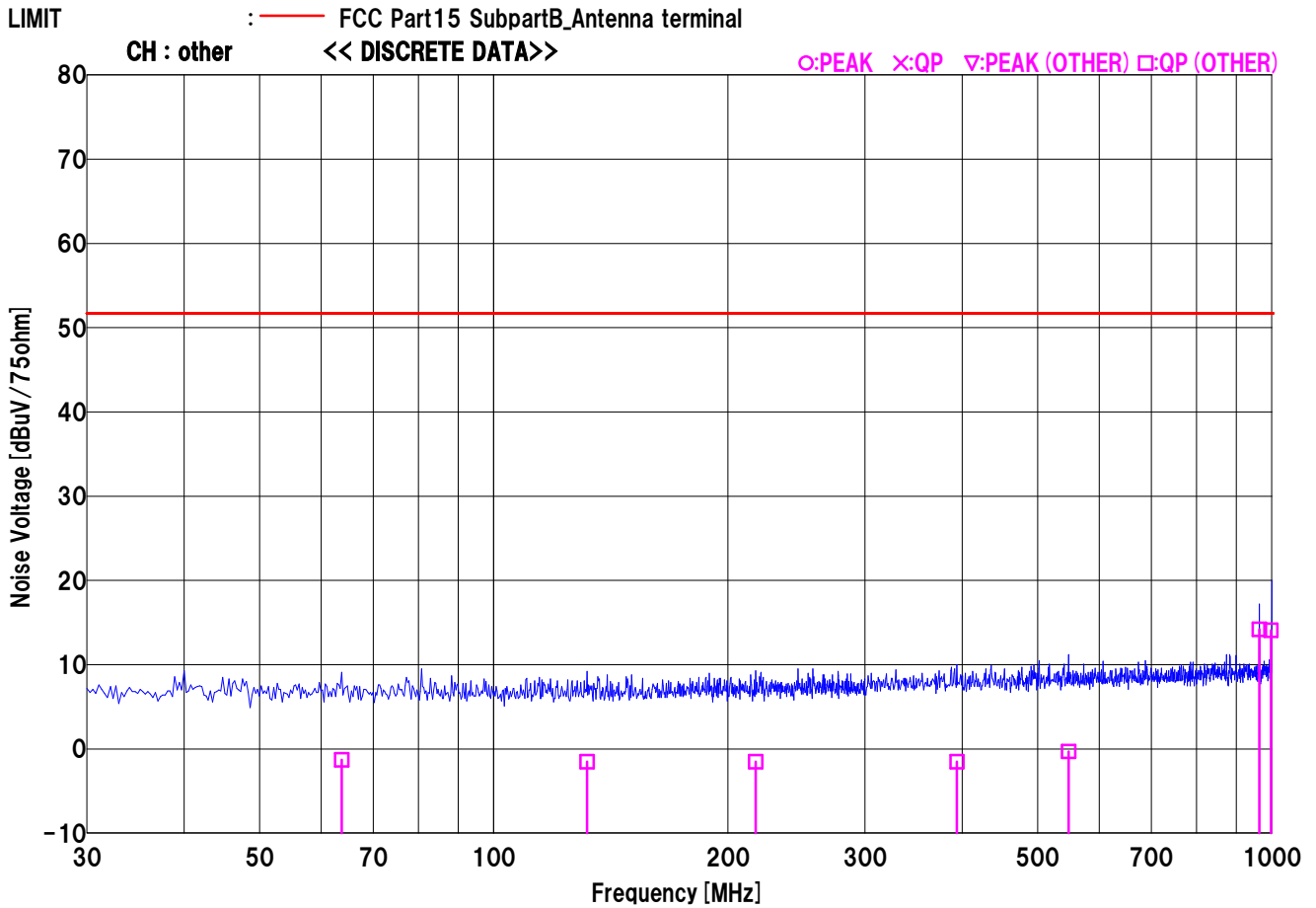
UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDC_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*63.750	----	17.6	-18.9	----	-1.3	51.7	53.0
	*131.789	----	17.3	-18.8	----	-1.5	51.7	53.2
	*217.111	----	17.0	-18.5	----	-1.5	51.7	53.2
	*393.802	----	16.7	-18.2	----	-1.5	51.7	53.2
	*547.804	----	17.5	-17.8	----	-0.3	51.7	52.0
	*963.612	----	31.7	-17.5	----	14.2	51.7	37.5
	*997.212	----	31.6	-17.5	----	14.1	51.7	37.6

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (87.75 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
87.75 MHz	110.240	----	17.3	-18.8	----	-1.5	51.7	53.2
	220.480	----	20.1	-18.5	----	1.6	51.7	50.1
	330.720	----	19.0	-18.4	----	0.6	51.7	51.1
	440.960	----	19.1	-18.0	----	1.1	51.7	50.6
	551.200	----	17.1	-17.8	----	-0.7	51.7	52.4
	661.440	----	17.5	-17.6	----	-0.1	51.7	51.8
	771.680	----	17.3	-17.4	----	-0.1	51.7	51.8
	881.920	----	17.6	-17.4	----	0.2	51.7	51.5
	992.160	----	17.5	-17.4	----	0.1	51.7	51.6

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
97.9 MHz	110.240	----	17.1	-18.8	----	-1.7	51.7	53.4
	220.480	----	20.0	-18.5	----	1.5	51.7	50.2
	330.720	----	19.0	-18.4	----	0.6	51.7	51.1
	440.960	----	19.0	-18.0	----	1.0	51.7	50.7
	551.200	----	17.1	-17.8	----	-0.7	51.7	52.4
	661.440	----	17.5	-17.6	----	-0.1	51.7	51.8
	771.680	----	17.3	-17.4	----	-0.1	51.7	51.8
	881.920	----	17.6	-17.4	----	0.2	51.7	51.5
	992.160	----	17.4	-17.4	----	0.0	51.7	51.7

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (107.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
107.9 MHz	110.240	----	17.3	-18.8	----	-1.5	51.7	53.2
	220.480	----	20.1	-18.5	----	1.6	51.7	50.1
	330.720	----	19.0	-18.4	----	0.6	51.7	51.1
	440.960	----	19.2	-18.0	----	1.2	51.7	50.5
	551.200	----	17.1	-17.8	----	-0.7	51.7	52.4
	661.440	----	17.5	-17.6	----	-0.1	51.7	51.8
	771.680	----	17.3	-17.4	----	-0.1	51.7	51.8
	881.920	----	17.6	-17.4	----	0.2	51.7	51.5
	992.160	----	17.5	-17.4	----	0.1	51.7	51.6

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

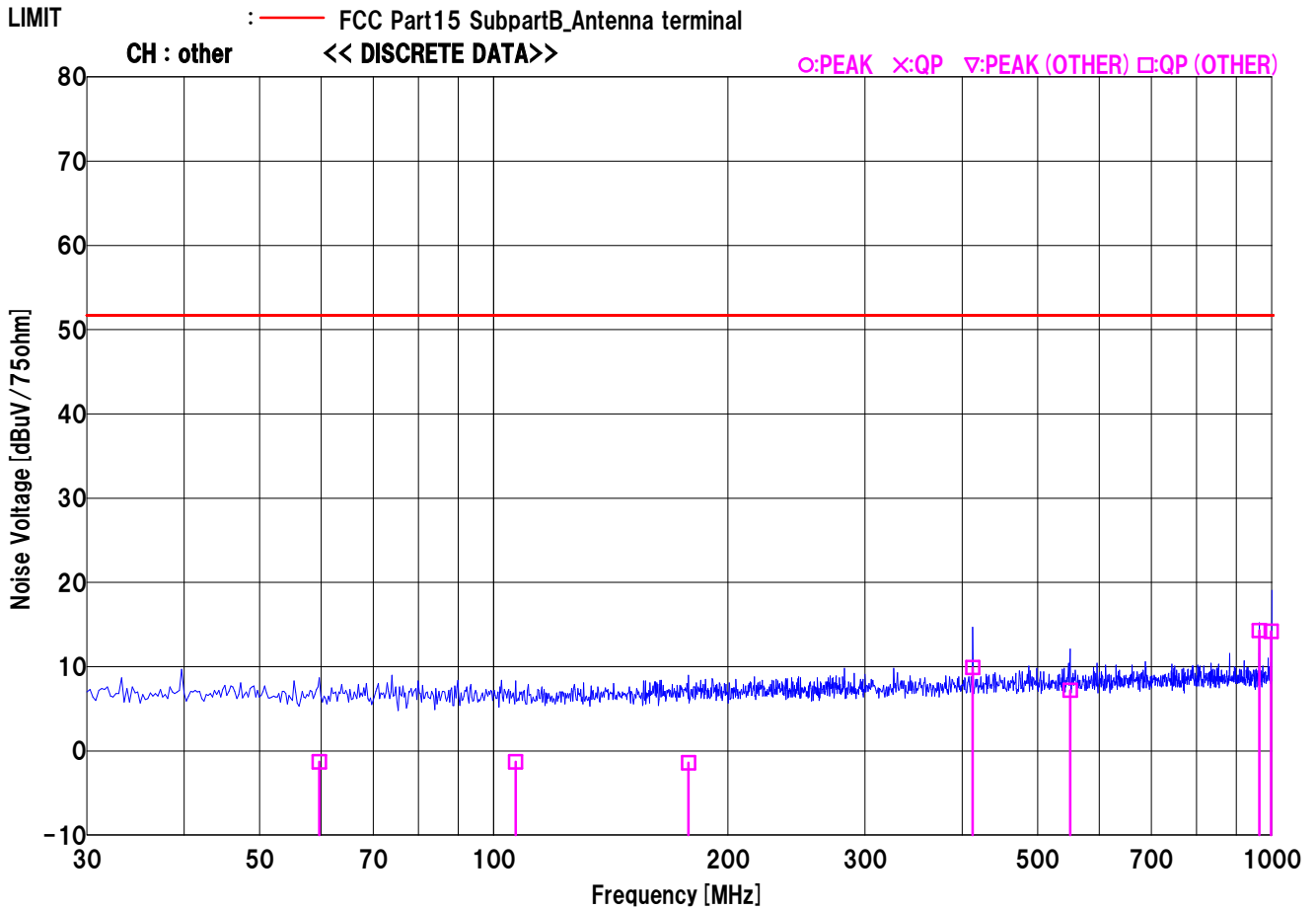
UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MDCD_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*59.700	----	17.6	-18.9	----	-1.3	51.7	53.0
	*106.680	----	17.5	-18.8	----	-1.3	51.7	53.0
	*177.960	----	17.1	-18.5	----	-1.4	51.7	53.1
	*412.702	----	28.1	-18.2	----	9.9	51.7	41.8
	*550.604	----	25.0	-17.8	----	7.2	51.7	44.5
	*963.612	----	31.8	-17.5	----	14.3	51.7	37.4
	*997.912	----	31.7	-17.5	----	14.2	51.7	37.5

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (87.75 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
87.75 MHz	110.240	----	17.2	-18.8	----	-1.6	51.7	53.3
	220.480	----	20.2	-18.5	----	1.7	51.7	50.0
	330.720	----	19.0	-18.4	----	0.6	51.7	51.1
	440.960	----	20.7	-18.0	----	2.7	51.7	49.0
	551.200	----	17.0	-17.8	----	-0.8	51.7	52.5
	661.440	----	18.0	-17.6	----	0.4	51.7	51.3
	771.680	----	17.1	-17.4	----	-0.3	51.7	52.0
	881.920	----	18.1	-17.4	----	0.7	51.7	51.0
	992.160	----	17.5	-17.4	----	0.1	51.7	51.6

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
97.9 MHz	110.240	----	17.0	-18.8	----	-1.8	51.7	53.5
	220.480	----	20.1	-18.5	----	1.6	51.7	50.1
	330.720	----	18.9	-18.4	----	0.5	51.7	51.2
	440.960	----	21.0	-18.0	----	3.0	51.7	48.7
	551.200	----	17.0	-17.8	----	-0.8	51.7	52.5
	661.440	----	19.0	-17.6	----	1.4	51.7	50.3
	771.680	----	17.5	-17.4	----	0.1	51.7	51.6
	881.920	----	18.0	-17.4	----	0.6	51.7	51.1
	992.160	----	17.2	-17.4	----	-0.2	51.7	51.9

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 08/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (107.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 53 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
107.9 MHz	110.240	----	17.2	-18.8	----	-1.6	51.7	53.3
	220.480	----	20.2	-18.5	----	1.7	51.7	50.0
	330.720	----	18.8	-18.4	----	0.4	51.7	51.3
	440.960	----	19.5	-18.0	----	1.5	51.7	50.2
	551.200	----	17.0	-17.8	----	-0.8	51.7	52.5
	661.440	----	18.1	-17.6	----	0.5	51.7	51.2
	771.680	----	17.3	-17.4	----	-0.1	51.7	51.8
	881.920	----	17.2	-17.4	----	-0.2	51.7	51.9
	992.160	----	17.3	-17.4	----	-0.1	51.7	51.8

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

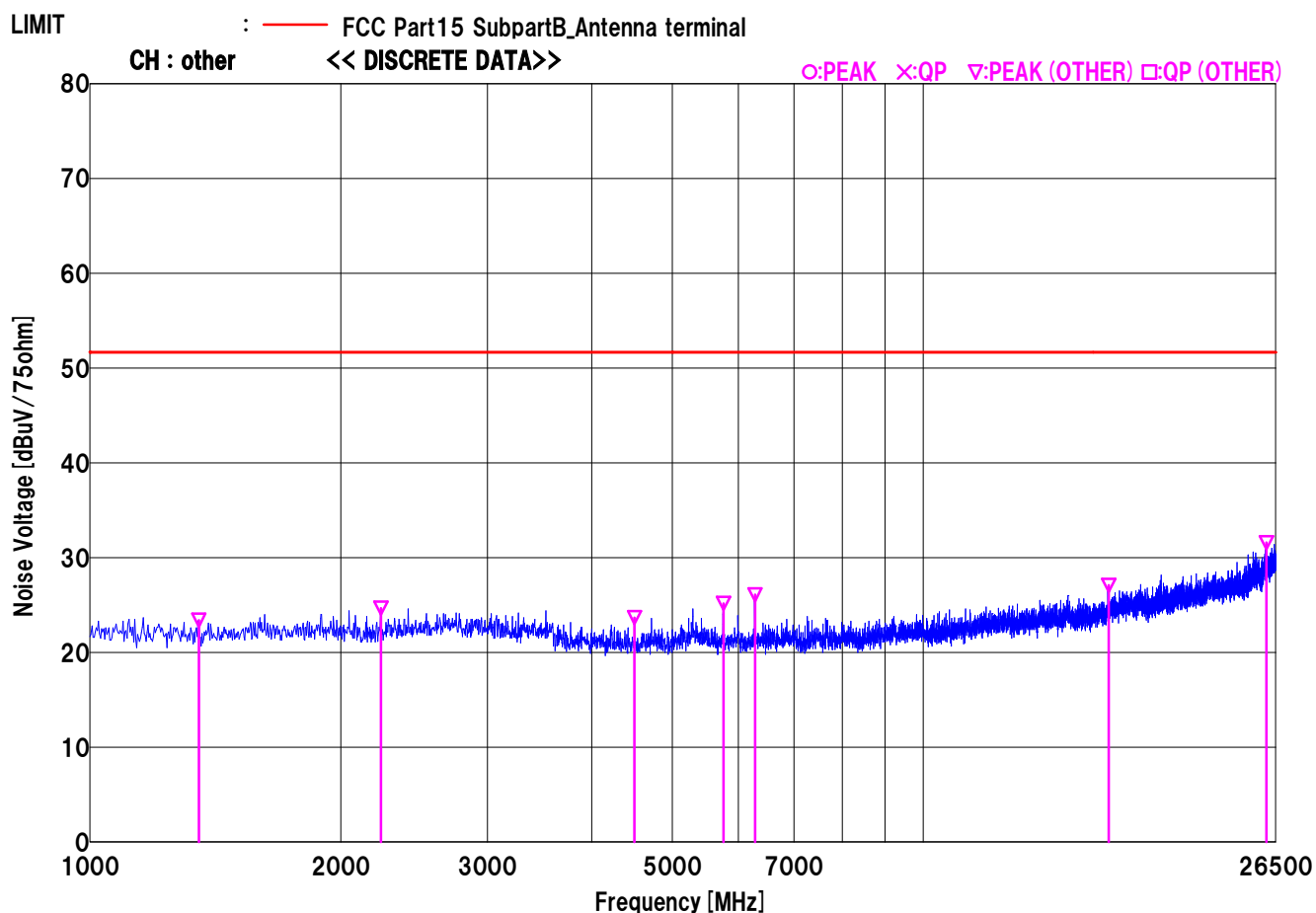
UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDC_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

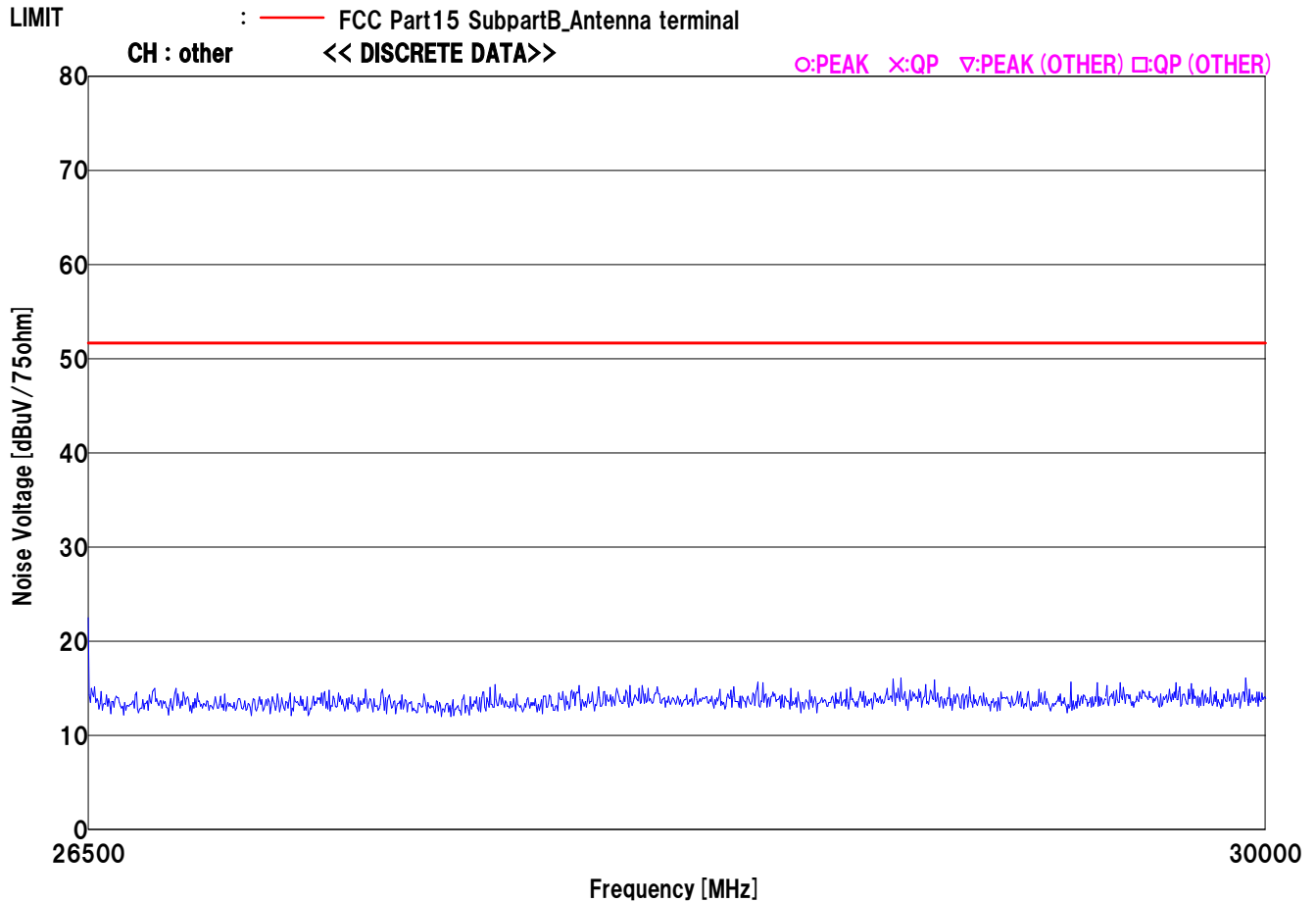
UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDC_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*1351.000	47.8	----	-24.4	23.4	----	51.7	28.3
	*2236.000	48.1	----	-23.4	24.7	----	51.7	27.0
	*4504.000	46.0	----	-22.3	23.7	----	51.7	28.0
	*5761.000	47.0	----	-21.8	25.2	----	51.7	26.5
	*6283.000	47.9	----	-21.8	26.1	----	51.7	25.6
	*16699.000	45.3	----	-18.2	27.1	----	51.7	24.6
	*25820.000	46.3	----	-14.7	31.6	----	51.7	20.1

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (87.75 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
87.75 MHz	1763.840	48.1	----	-22.8	25.3	----	51.7	26.4
	2204.800	47.7	----	-22.4	25.3	----	51.7	26.4
	4409.600	45.1	----	-21.1	24.0	----	51.7	27.7
	5291.520	48.3	----	-20.4	27.9	----	51.7	23.8

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
97.9 MHz	1212.640	47.7	----	-24.0	23.7	----	51.7	28.0
	1763.840	47.5	----	-22.8	24.7	----	51.7	27.0
	2204.800	47.7	----	-22.4	25.3	----	51.7	26.4
	4189.120	45.3	----	-21.1	24.2	----	51.7	27.5
	5291.520	48.2	----	-20.4	27.8	----	51.7	23.9

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (107.9 MHz)_analog
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
107.9 MHz	1763.840	47.6	----	-22.8	24.8	----	51.7	26.9
	2204.800	48.6	----	-22.4	26.2	----	51.7	25.5
	4409.600	45.8	----	-21.1	24.7	----	51.7	27.0
	5291.520	48.7	----	-20.4	28.3	----	51.7	23.5

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

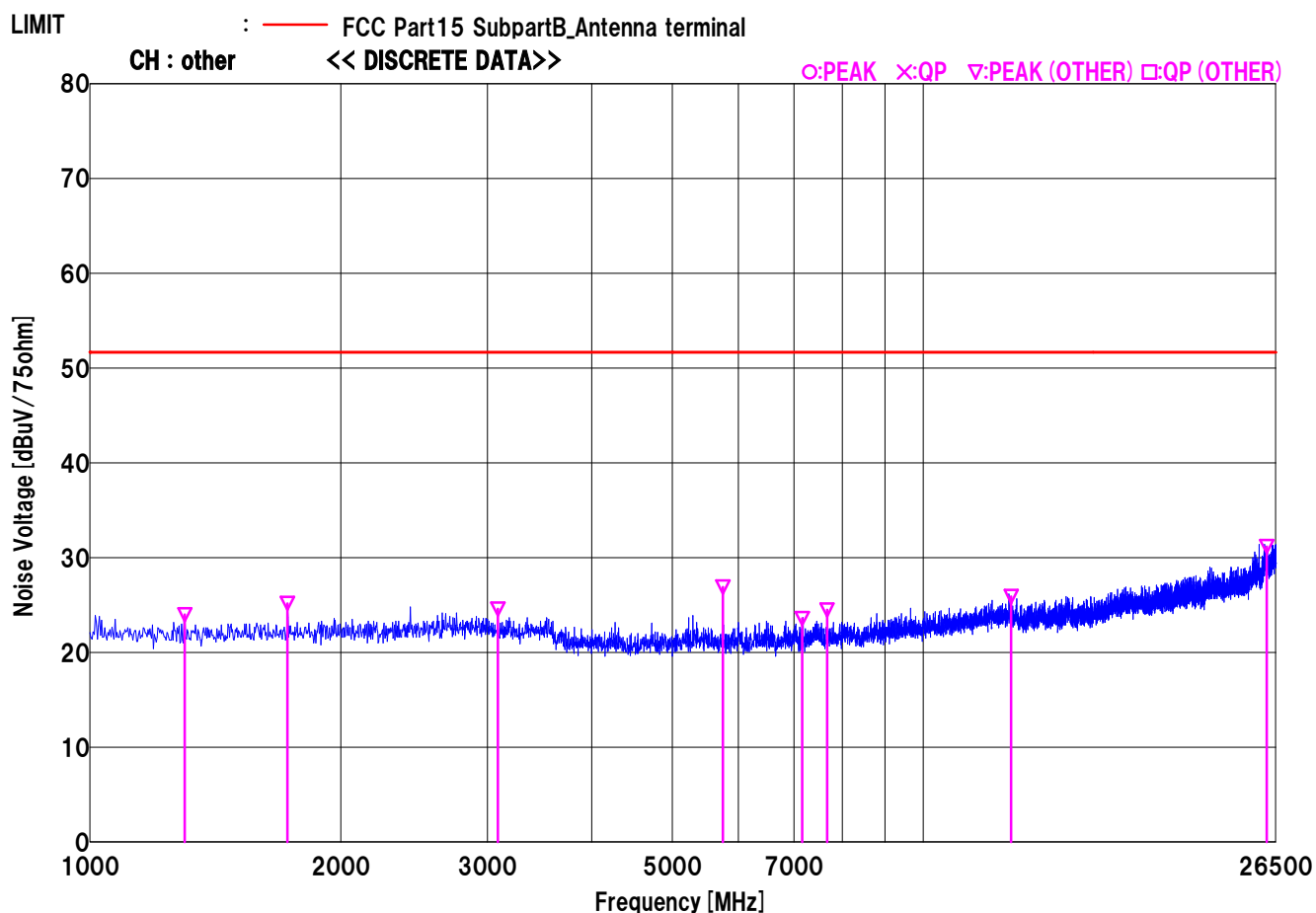
UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MDCD_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDC_DCV_HWC_076

Mode : FM Receiving (97.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

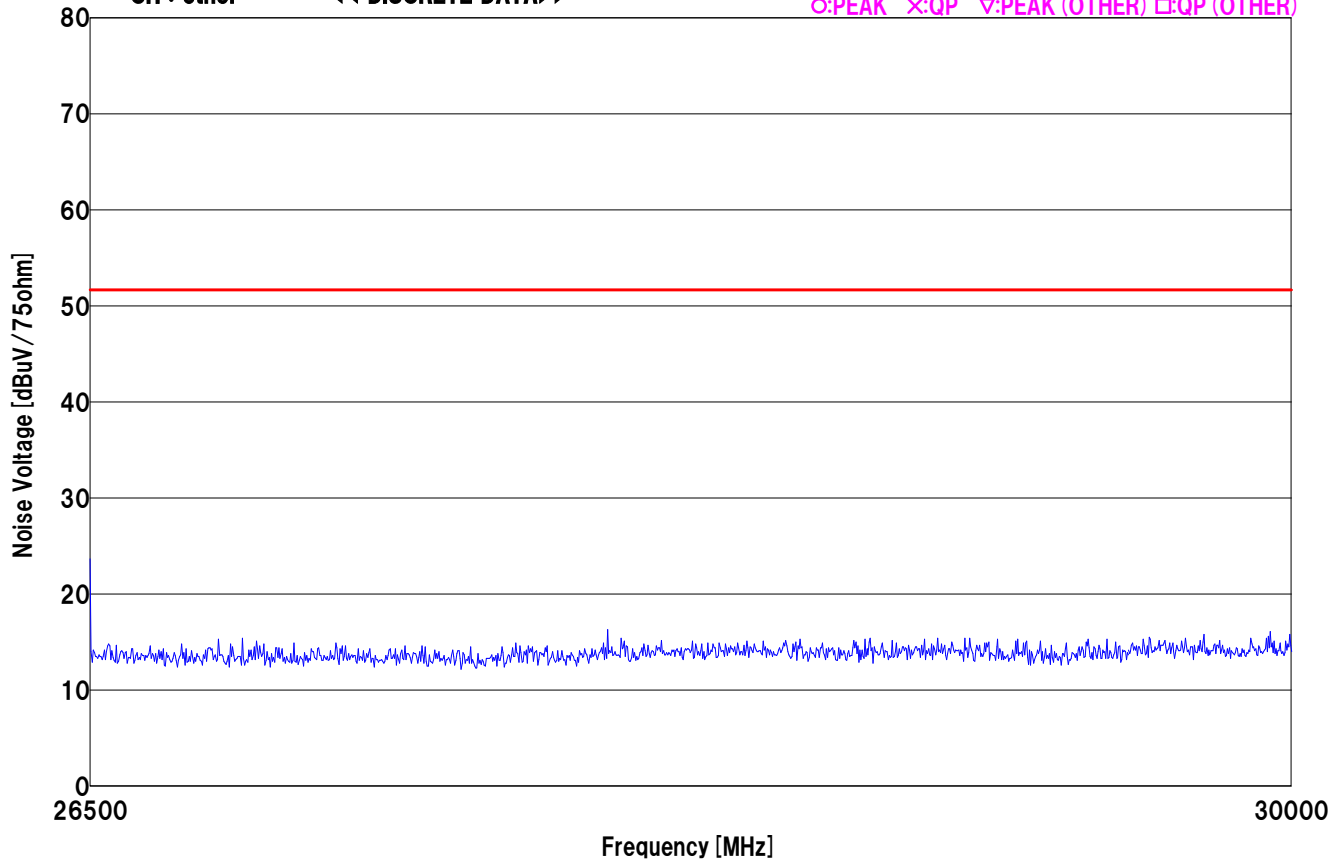
Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : — FCC Part15 SubpartB_Antenna terminal

CH : other << DISCRETE DATA>>

○:PEAK ×:QP ▽:PEAK (OTHER) □:QP (OTHER)



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDG_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Other

Engineer : Yohsuke Matsuzawa

LIMIT : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]	[dB]	[dBuV/75]	[dBuV/75]	[dB]		
other	*1300.000	48.5	----	-24.5	24.0	----	51.7	27.7
	*1726.000	48.9	----	-23.7	25.2	----	51.7	26.5
	*3088.000	47.6	----	-23.0	24.6	----	51.7	27.1
	*5749.000	48.7	----	-21.8	26.9	----	51.7	24.8
	*7159.000	45.2	----	-21.6	23.6	----	51.7	28.1
	*7666.000	46.2	----	-21.7	24.5	----	51.7	27.2
	*12757.000	44.6	----	-18.7	25.9	----	51.7	25.8
	*25840.000	45.8	----	-14.6	31.2	----	51.7	20.5

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCDL_DCV_HWC_076

Mode : FM Receiving (87.75 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
87.75 MHz	1763.840	48.5	----	-23.6	24.9	----	51.7	26.8
	2204.800	48.8	----	-23.4	25.4	----	51.7	26.3
	4409.600	45.5	----	-22.3	23.2	----	51.7	28.5
	5291.520	48.0	----	-21.9	26.1	----	51.7	25.6

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (97.9 MHz) _digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
97.9 MHz	1212.640	47.9	----	-24.7	23.2	----	51.7	28.5
	1763.840	46.3	----	-23.6	22.7	----	51.7	29.0
	2204.800	47.7	----	-23.4	24.3	----	51.7	27.4
	4189.120	46.1	----	-22.5	23.6	----	51.7	28.1
	5291.520	49.0	----	-21.9	27.1	----	51.7	24.6

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 11/Nov/2024

Company : Panasonic Corporation
Kind of EUT : AV Control Unit
Model No. : AM2301
Serial No. : MCD C_DCV_HWC_076

Mode : FM Receiving (107.9 MHz)_digital
Order No. : 15263628
Power : DC 13.2 V
Temp./Humi. : 23 deg.C / 50 %RH

Remarks : Sub port, Local

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB_Antenna terminal
LIMIT (Harmonics) : FCC Part15 SubpartB_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
107.9 MHz	1763.840	48.0	----	-23.6	24.4	----	51.7	27.3
	2204.800	48.6	----	-23.4	25.2	----	51.7	26.5
	4409.600	45.7	----	-22.3	23.4	----	51.7	28.3
	5291.520	47.7	----	-21.9	25.8	----	51.7	25.9

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+ATT-Amp) [dB]

APPENDIX 2

Test Instruments

EMI test equipment

Test Name	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Calibration Interval (Month)
AT	144878	Pre Amplifier	Hewlett Packard	8449B	3008A01268	2024/04/04	12
AT	145006	Pre Amplifier	TSJ (Techno Science Japan)	MLA-8k03-D01-35	81212	2024/06/13	12
AT	145030	Coaxial Cable	Fujikura Shoji Co., LTD	5D2W	-	2024/02/07	12
AT	145110	Digital Tester	SANWA	PC500	7019240	2024/05/29	12
AT	145137	Attenuator	Keysight Technologies Inc	8493C-010	74865	2024/10/10	12
AT	145164	Coaxial Cable	Fujikura Shoji Co., LTD	5D-2W	-	2024/02/07	12
AT	145790	Test Receiver	Rohde & Schwarz	ESU40	100093	2024/04/19	12
AT	146201	Terminator	TME	CT-01 BP	-	2024/02/16	12
AT	146209	Test Receiver	Rohde & Schwarz	ESU26	100484	2024/09/26	12
AT	146293	Thermo-Hygrometer	A&D Company	AD-5681	4062518	2024/08/12	12
AT	146458	Terminator	TME	CT01-BP	-	-	-
AT	147480	Tape Measure	ASKUL	-	-	-	-
AT	150463	Test Receiver	Rohde & Schwarz	ESW44	101581	2024/08/06	12
AT	156475	DC Block	Keysight Technologies Inc	N9398C	MY46457607	2024/05/08	12
AT	160494	Attenuator	Weinschel Corp.	54A-10	83420	2023/12/12	12
AT	237721	Pre Amplifier	TSJ (Techno Science Japan)	MLA-2440-J03	23060019	2024/06/05	12
AT	240394	Coaxial cable, Matching pad	JFW Industries, Inc.	5D2W/57Z-3G N M/F	-	2024/10/16	12
AT	242075	Terminator	Weinschel - API Technologies Corp	M1459A	121073	2023/11/17	12
AT	245176	Coaxial Cable	Hayashi-Repic co., Ltd.	KMS020B-GL140sE-KMS020B-2.0m	49334-01-03	2024/02/14	12
AT	245177	Coaxial Cable	Hayashi-Repic co., Ltd.	KMS020B-GL140sE-KMS020B-2.0m	49334-01-04	2024/02/14	12
AT,RE	170932	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3(RE,CE,ME,PE)	Ver 3.1.0546	-	-
RE	145005	Pre Amplifier	Toyo Corporation	TPA0118-36	2046104	2024/02/16	12
RE	145007	Pre Amplifier	Toyo Corporation	HAP18-26W	19	2024/08/21	12
RE	145023	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	BBA9106	91032666	2024/05/10	12
RE	145126	Pre Amplifier	SONOMA	310N	290213	2024/02/07	12
RE	145129	Pre Amplifier	Toyo Corporation	HAP26-40W	B3208602403-176	2024/05/09	12
RE	145171	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	/0901-271(RF Selector)	2024/04/01	12
RE	145176	Coaxial Cable	Suhner	SUCOFLEX 102	32703/2	2024/08/21	12
RE	145501	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	9120D-739	2024/03/20	12
RE	145512	Horn Antenna	ETS-Lindgren	3160-09	00094868	2024/06/20	12
RE	145514	Horn Antenna	ETS-Lindgren	3160-10	00092383	2024/06/20	12
RE	145529	Logperiodic Antenna	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	196	2024/05/10	12
RE	145565	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	2024/04/03	12
RE	145566	Semi-Anechoic Chamber	TDK	SAEC-03(SVSWR)	3	2024/05/23	12
RE	145817	HD Radio Vector Signal Generator	MEGURO ELECTRONICS CORPORATION	MSG-3100	2100109	-	-
RE	146210	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997823	2024/09/24	12
RE	146257	Signal Generator	Rohde & Schwarz	SMBV100A	262152	2024/09/23	12
RE	146432	Tape Measure	TAJIMA	GL19-55	-	-	-
RE	146512	Matching Pad	TAMAGAWA	ZT-130	1209458	2024/06/14	12
RE	156380	Coaxial Cable	Huber+Suhner	SUCOFLEX_104_E	SN MY 13406/4E	2024/05/09	12

EMI test equipment

Test Name	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Calibration Interval (Month)
RE	179540	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	802815/2	2024/03/05	12
RE	191840	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	-	2024/08/12	12
RE	194685	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA 9120 C	711	2024/03/20	12
RE	196945	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	803414/2	2024/03/12	12
RE	200010	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	575618/4	2024/06/05	12
RE	213530	Test Receiver	Rohde & Schwarz	ESW44	103068	2024/02/22	12
RE	243217	Coaxial Cable	Hayashi-Repic co., Ltd.	SMS13-13A26-NMS13-9.0m	49306-01-04	2023/12/20	12
RE	248303	Attenuator	JFW	50HFFA-006-2/18N	-	2024/05/06	12

*Hyphens for Last Calibration Date and Cal Int (month) are instruments that Calibration is not required (e.g. software), or instruments checked in advance before use.

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

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

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

Test Item:

RE: Radiated emission,

AT: Antenna terminal disturbance voltage