



EMI TEST REPORT

Test report No. 13408125M-G-R1

Applicant : Panasonic Corporation
Type of EUT : Car Navigation
Model Number of EUT : AT2104
FCC ID : ACJ932AT2104
Test Regulation(s) : FCC Part15 Subpart B:2020, FM Broadcast Receiver
Test result : Complied (Refer to Section 3.2)

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the above regulation.
4. The test results in this test report are traceable to the national or international standards.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by any agency of the Federal Government.
6. This test report covers EMC technical requirements. It does not cover administrative issues such as Manual or non-EMC test related Requirements. (if applicable)
7. The all test items in this test report are conducted by UL Japan, Inc. Kashima EMC Lab.
8. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
9. The information provided from the customer for this report is identified in Section 1.
10. The test was performed in accordance with FCC regulation, as an alternative arrangement of ICES-003.
11. This report is a revised version of 13408125M-G. 13408125M-G is replaced with this report.

Date of test: August 21 to 28, 2020

**Representative
test operator:**

K. Ando

Kazuhiro Ando
Engineer
Consumer Technology Division

Approved by :

Kenichi Suda

Kenichi Suda
Manager
Consumer Technology Division



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

UL Japan, Inc.
Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan
Telephone : +81-478-88-6500
Facsimile : +81-478-82-3373

REVISION HISTORY

Original Test Report No.: 13408125M-G-R1

Revision	Test report No.	Date	Page revised	Contents																																																														
- (Original)	13408125M-G	September 30, 2020	-	-																																																														
1	13408125M-G-R1	November 17, 2020	P.6	Correction of “Radio Specification”: from IEEE802.11ac (80 MHz band) 5210 MHz, 5755 MHz to IEEE802.11ac (80 MHz band) 5210 MHz, 5775 MHz =>																																																														
1	13408125M-G-R1	November 17, 2020	P.6	Correction of “Radio Specification”: from <table> <tr> <td rowspan="12">Antenna Gain</td><td rowspan="6">Hi type (14 inch Display)</td><td rowspan="3">RF0</td><td>2.4 GHz WLAN</td><td>0.07 dBi</td></tr> <tr> <td>U-NII-1</td><td>2.14 dBi</td></tr> <tr> <td>U-NII-3</td><td>1.00 dBi</td></tr> <tr> <td rowspan="3">RF1</td><td>BT, BT LE</td><td>1.01 dBi</td></tr> <tr> <td>U-NII-1</td><td>2.43 dBi</td></tr> <tr> <td>U-NII-3</td><td>2.59 dBi</td></tr> <tr> <td rowspan="6">Lo type (8 inch Display)</td><td rowspan="3">RF0</td><td>2.4 GHz WLAN</td><td>4.04 dBi</td></tr> <tr> <td>U-NII-1</td><td>1.19 dBi</td></tr> <tr> <td>U-NII-3</td><td>2.47 dBi</td></tr> <tr> <td rowspan="3">RF1</td><td>BT, BT LE</td><td>2.08 dBi</td></tr> <tr> <td>U-NII-1</td><td>1.00 dBi</td></tr> <tr> <td>U-NII-3</td><td>1.43 dBi</td></tr> </table> to <table> <tr> <td rowspan="12">Antenna Gain</td><td rowspan="6">Hi type (14 inch Display)</td><td rowspan="3">RF0</td><td>2.4 GHz WLAN</td><td>-0.83 dBi</td></tr> <tr> <td>U-NII-1</td><td>2.17 dBi</td></tr> <tr> <td>U-NII-3</td><td>2.37 dBi</td></tr> <tr> <td rowspan="3">RF1</td><td>BT, BT LE</td><td>-0.15 dBi</td></tr> <tr> <td>U-NII-1</td><td>2.59 dBi</td></tr> <tr> <td>U-NII-3</td><td>2.64 dBi</td></tr> <tr> <td rowspan="6">Lo type (8 inch Display)</td><td rowspan="3">RF0</td><td>2.4 GHz WLAN</td><td>2.25 dBi</td></tr> <tr> <td>U-NII-1</td><td>1.41 dBi</td></tr> <tr> <td>U-NII-3</td><td>0.99 dBi</td></tr> <tr> <td rowspan="3">RF1</td><td>BT, BT LE</td><td>-0.22 dBi</td></tr> <tr> <td>U-NII-1</td><td>1.08 dBi</td></tr> <tr> <td>U-NII-3</td><td>2.14 dBi</td></tr> </table>	Antenna Gain	Hi type (14 inch Display)	RF0	2.4 GHz WLAN	0.07 dBi	U-NII-1	2.14 dBi	U-NII-3	1.00 dBi	RF1	BT, BT LE	1.01 dBi	U-NII-1	2.43 dBi	U-NII-3	2.59 dBi	Lo type (8 inch Display)	RF0	2.4 GHz WLAN	4.04 dBi	U-NII-1	1.19 dBi	U-NII-3	2.47 dBi	RF1	BT, BT LE	2.08 dBi	U-NII-1	1.00 dBi	U-NII-3	1.43 dBi	Antenna Gain	Hi type (14 inch Display)	RF0	2.4 GHz WLAN	-0.83 dBi	U-NII-1	2.17 dBi	U-NII-3	2.37 dBi	RF1	BT, BT LE	-0.15 dBi	U-NII-1	2.59 dBi	U-NII-3	2.64 dBi	Lo type (8 inch Display)	RF0	2.4 GHz WLAN	2.25 dBi	U-NII-1	1.41 dBi	U-NII-3	0.99 dBi	RF1	BT, BT LE	-0.22 dBi	U-NII-1	1.08 dBi	U-NII-3	2.14 dBi
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Reference: Abbreviations (Including words undescribed in this report)

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

UL Japan, Inc.

Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

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Section 1: Customer information

Company Name : Panasonic Corporation
Address : 4261 Ikonobe-cho, Tsuzuki-ku, Yokohama-shi, Kanagawa, 224-8520 Japan
Telephone Number : +81-50-3758-9201
Contact Person : Ichiro Hirose

The information provided from the customer is as follows:

- Applicant, Type of EUT, Model Number of EUT, FCC ID on the cover page 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
 - SECTION 4: Operation of EUT during testing
- * The laboratory is exempted from liability of any test results affected from the information in SECTION 2 and 4.

Section 2: Equipment under test (EUT)

2.1 Identification of EUT

Type : Car Navigation
Model Number : AT2104
Serial Number : Refer to SECTION 4.2
Rating : DC 13.2 V
Receipt Date : June 30, 2020
Country of Mass-production : Japan, Mexico, Czech Republic
Condition : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Modification : No Modification by the test lab

2.2 Product description

Model: AT2104 (referred to as the EUT in this report) is a Car Navigation.

There are 2 type for AT2104; Hi type(14 inch Display) and Lo type(8 inch Display). The same RF Part and antenna are installed in these models, however antenna gain and antenna arrangement are different.

General specification

The maximum clock frequencies used in the EUT: 125 MHz

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Kashima EMC Lab.

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Telephone : +81-478-88-6500

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Radio Specification

	IEEE802.11b	IEEE802.11g	IEEE802.11n (20 MHz band)	IEEE802.11n (40 MHz band)
Frequency of operation	2412 MHz - 2462 MHz	2412 MHz - 2462 MHz	2412 MHz – 2462 MHz, 5180 MHz – 5240 MHz, 5745 MHz – 5825 MHz	5190 MHz, 5230 MHz, 5755 MHz, 5795 MHz
Channel spacing	5 MHz		2.4 GHz band: 5 MHz 5 GHz band: 20 MHz	40 MHz
Modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)	OFDM (64QAM, 16QAM, QPSK, BPSK)	
	IEEE802.11a	IEEE802.11ac (20 MHz band)	IEEE802.11ac (40 MHz band)	IEEE802.11ac (80 MHz band)
Frequency of operation	5180 MHz – 5240 MHz, 5745 MHz – 5825 MHz	5180 MHz – 5240 MHz, 5745 MHz – 5825 MHz	5190 MHz, 5230 MHz, 5755 MHz, 5795 MHz	5210 MHz, 5775 MHz
Channel spacing	20 MHz		40 MHz	80 MHz
Modulation	OFDM (64QAM, 16QAM, QPSK, BPSK)	OFDM (256QAM,16QAM,QPSK,BPSK)		
	Bluetooth (BR/EDR)		Bluetooth Low Energy	
Frequency of operation	2402 MHz - 2480 MHz		2402 MHz - 2480 MHz	
Channel spacing	1 MHz		2 MHz	
Modulation	FHSS, GFSK, $\pi/4$ DQPSK, 8DPSK	FHSS, GFSK		
Antenna type	Inverted F type antenna			
Antenna Gain	Hi type (14 inch Display)	RF0	2.4 GHz WLAN	-0.83 dBi
			U-NII-1	2.17 dBi
			U-NII-3	2.37 dBi
		RF1	BT, BT LE	-0.13 dBi
			U-NII-1	2.59 dBi
			U-NII-3	2.64 dBi
	Lo type (8 inch Display)	RF0	2.4 GHz WLAN	2.25 dBi
			U-NII-1	1.41 dBi
			U-NII-3	0.99 dBi
		RF1	BT, BT LE	-0.22 dBi
U-NII-1	1.08 dBi			
U-NII-3	2.14 dBi			
Antenna Connector type	U.FL connector			
Operating Temperature	-30 deg. C to + 65 deg. C			

FM tuner specification

Frequency of operation : 87.75 MHz - 107.9 MHz
Intermediate frequency : ± 388 kHz

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Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

Section 3: Test specifications, procedures and results

3.1 Test specification

Test Specifications : FCC Part15 Subpart B:2020, FM Broadcast Receiver
FCC Part 15 final revised on June 26, 2020 and effective July 27, 2020

Title : FCC 47CFR Part15 Radio Frequency Device
Subpart B Unintentional Radiators

3.2 Procedures & results

Item	Test Procedure	Limits	Deviation	Worst margin	Result	Remarks
Conducted emission	ANSI C63.4:2014 7. AC power - line conducted emission measurements	FCC: Part 15 Subpart B 15.107(a)	N/A	N/A	N/A	*1)
Radiated emission	ANSI C63.4:2014 8. Radiated emission measurements, IEEE187:2003	FCC: Part 15 Subpart B 15.109(a)	N/A	<u>Hi type</u> 6.6 dB Freq: 3525.520 MHz Detector: Average Pola: Horizontal <u>Lo type</u> 3.1 dB Freq: 3525.520 MHz Detector: Average Pola: Horizontal	Complied# a)	*2)
Antenna Terminal	FCC: ANSI C63.4:2014 12. Measurement of unintentional radiators other than ITE, IEEE187:2003	FCC: Part 15 Subpart B 15.111(a)	N/A	<u>Hi type</u> 4.6 dB Freq: 3465.216 MHz Peak <u>Hi type</u> 4.2 dB Freq: 3465.216 MHz Peak	Complied b)	*2)
Note: UL Japan, Inc's EMI Work Procedure 13-EM-W0420. *1) The test is not applicable since the EUT does not have AC Mains ports. *2) Measurements were performed up to 40 GHz since the highest frequency of internal source of the EUT is 5825 MHz. a) Refer to APPENDIX 1 (data of Radiated Emission) b) Refer to APPENDIX 1 (data of Antenna Terminal Conducted Emission) Symbols: Complied The data of this test item has enough margin, more than the measurement uncertainty. Complied# The data of this test item meets the limits unless the measurement uncertainty is taken into consideration.						

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Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

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3.3 Addition to standards

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

3.4 Confirmation

UL Japan, Inc. hereby confirm that EUT, in the configuration tested, complies with the specification(s)
FCC Part15 Subpart B:2020, FM Broadcast Receiver.

3.5 Uncertainty

EMI

There is no applicable rule of uncertainty in this applied standard. Therefore, the results are derived depending on whether laboratory uncertainty is applied.

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

Conducted emission

Frequency range	Required Uncertainty (+/-)	Uncertainty (+/-)
0.15 MHz to 30 MHz	3.4 dB	3.3 dB

Radiated emission

Measurement distance	Frequency range	Required Uncertainty (+/-)	Uncertainty (+/-)
3 m	9 kHz to 30 MHz	Not Defined	2.9 dB
	30 MHz to 200 MHz	6.3 dB	6.1 dB
	200 MHz to 1000 MHz		6.2 dB
	1 GHz to 6 GHz	5.2 dB	5.0 dB
	6 GHz to 18 GHz	5.5 dB	5.4 dB
	18 GHz to 40 GHz	Not Defined	5.5 dB
1 m	1 GHz to 18 GHz	Not Defined	5.4 dB
	18 GHz to 26.5 GHz		5.6 dB
0.5 m	26.5 GHz to 40 GHz	Not Defined	5.9 dB

Antenna Terminal Voltage

Frequency range	Required Uncertainty (+/-)	Uncertainty (+/-)
30 MHz to 1000 MHz	Not Defined	2.99 dB
1 GHz to 40 GHz		3.05 dB

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Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

3.6 Test Location

UL Japan, Inc. Kashima EMC Lab.

1614 Mushihata, Katori-shi, Chiba-ken, 289-0341 JAPAN

Telephone: +81 478 88 6500, Facsimile: +81 478 82 3373

JAB Accreditation No.:RTL02610 / FCC Test Firm Registration Number: 910230 / ISED Lab Company Number: 4659A

Test site	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Open site	6.0 x 5.5 x 2.5	20 x 40	10 m
No.5 Open site	8.6 x 7.1 x 2.4	18 x 23	10 m
No.1 Shielded room	5.4 x 4.5 x 2.3	-	-
No.5 Shielded Room	4.2 x 3.1 x 2.5	-	-
No.9 Shielded Room	6.1 x 3.6 x 2.8	-	-
No.6 Semi-anechoic Chamber	8.5 x 5.5 x 5.2	-	3 m
No.10 Semi-anechoic Chamber	18.4 x 9.9 x 7.7	-	10 m
No.11 Semi-anechoic Chamber	9.0 x 6.5 x 5.2	-	3 m
No.1 Measurement room	5.0 x 3.7 x 2.6	-	-
No.2 Measurement room	4.3 x 4.4 x 2.7	-	-
No.3 Measurement room	4.5 x 5.3 x 2.7	-	-

3.7 Test setup, Test Data & Test instruments

Refer to Appendix 1 to 3.

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Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

Section 4: Operation of EUT during testing

4.1 Operating mode

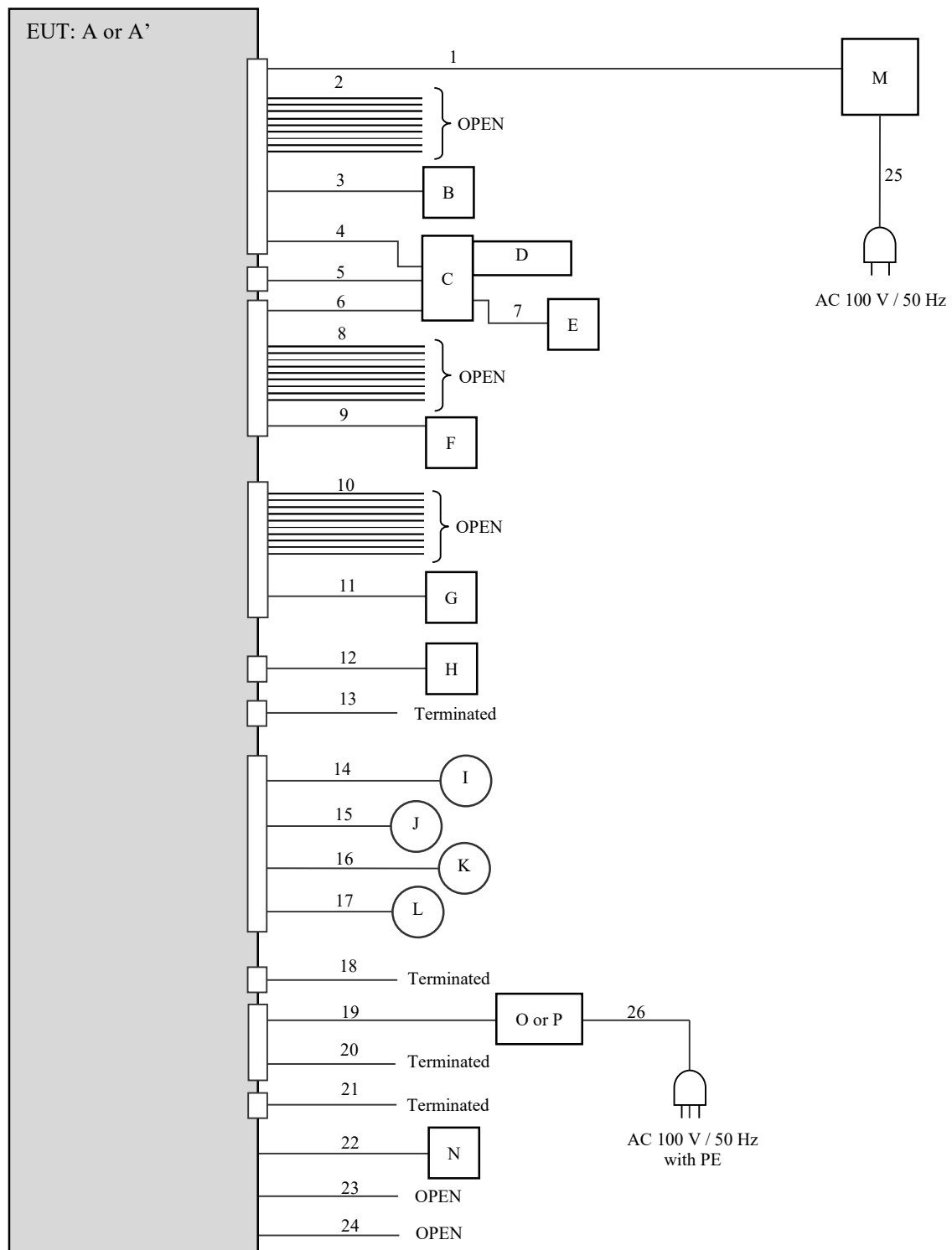
The EUT exercise program used during testing was designed to exercise the various system components in a manner similar to typical use.

Test sequence is : FM Receiving (87.75 MHz / 97.9 MHz / 107.9 MHz)
used : *Analog and Digital

Software : YEP1RM06680A Ver.1.0

Justification : The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals



*Cabling and setup were taken into consideration and test data was taken under worse case conditions.

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1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

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Description of EUT and support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Car Navigation	AT2104	500025	Panasonic Corporation	EUT, Hi type
A'	Car Navigation	AT2104	500109	Panasonic Corporation	EUT, Lo type
B	Steering Switch	ST-SW-IF	0011	Panasonic Corporation	-
C	IF-Box	DEP32-10078	034	Panasonic Corporation	-
D	USB Memory	D33B29	-	Silicon Power	-
E	Smart Phone	ZTE B2016	cffdc231	ZTE	-
F	MIC	SDA3510A	0DC062841	Panasonic Corporation	-
G	MIC	SDA3510A	0DC062517	Panasonic Corporation	-
H	Rear Camera	GP-KDM301RC	06SD00026	Panasonic Corporation	-
I	Speaker	KFC-RS101	-	JVC KENWOOD	-
J	Speaker	KFC-RS101	-	JVC KENWOOD	-
K	Speaker	KFC-RS101	-	JVC KENWOOD	-
L	Speaker	KFC-RS101	-	JVC KENWOOD	-
M	Power Supply (DC)	GSV3000	1708192899	DIAMOND ANTENNA	-
N	JIG	J5DBG	WR14-4333	-	-
O	Signal Generator	N5182B	MY57280004	Keysight	for Analog
P	HD Radio Vector Signal Generator	MSG-3100	2100109	MEGURO ELECTRONICS	for Digital

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC	3.0	Unshielded	Unshielded	-
2	Signal	3.0	Unshielded	Unshielded	-
3	Steering Switch	3.0 + 0.1	Unshielded	Unshielded	-
4	DC	3.0	Unshielded	Unshielded	-
5	IF-Box	2.5	Shielded	Shielded	-
6	Signal	3.0	Unshielded	Unshielded	-
7	USB	1.0	Shielded	Shielded	-
8	Signal	3.0	Unshielded	Unshielded	-
9	MIC	3.0 + 0.4	Unshielded	Unshielded	-
10	Signal	3.0	Unshielded	Unshielded	-
11	MIC	3.0 + 0.4	Unshielded	Unshielded	-
12	Rear Camera	3.0 + 0.2	Unshielded	Unshielded	-
13	GPS	0.1 + 2.5	Shielded	Shielded	-
14	Speaker	3.0 + 1.0	Unshielded	Unshielded	-
15	Speaker	3.0 + 1.0	Unshielded	Unshielded	-
16	Speaker	3.0 + 1.0	Unshielded	Unshielded	-
17	Speaker	3.0 + 1.0	Unshielded	Unshielded	-
18	DCM	3.0	Shielded	Shielded	-
19	FM	0.1 + 1.5	Shielded	Shielded	-
20	FM	0.1 + 1.0	Shielded	Shielded	-
21	Sirius XM	1.0	Shielded	Shielded	-
22	Signal	0.1	Unshielded	Unshielded	*1)
23	UART	0.2	Unshielded	Unshielded	*1)
24	Signal	0.15	Unshielded	Unshielded	*1)
25	AC	1.7	Unshielded	Unshielded	-
26	AC	1.8	Unshielded	Unshielded	-

*1) This cable is for testing and is not included with products.

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Section 5: Radiated emission

5.1 Operating environment

Test room : Refer to data
Temperature : Refer to data
Humidity : Refer to data

5.2 Test configuration

The EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The table is made of polystyrene foam. 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 for the forming a bundle 30 cm to 40 cm long and were hanged at a 40 cm height to the ground plane.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Photographs of the set up are shown in Appendix 1.

5.3 Test conditions

Frequency range : 30 MHz - 40 GHz
Test distance : 3.0 m (below 1 GHz)
3.0 m (1 GHz – 10 GHz)
1.0 m (10 GHz – 26.5 GHz)
0.5 m (26.5 GHz – 40 GHz)
EUT position : Table top

5.4 Test procedure

The Radiated Electric Field Strength intensity has been measured on an semi anechoic chamber with a ground plane at a distance of 3 m*.

*Measuring distance

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.

Test antenna was aimed at the EUT for receiving the maximum signal and always kept within the illumination area of the 3 dB beam width of the antenna.

The measurements were performed for vertical or horizontal antenna polarization or both as necessary.

The radiated emission measurements were made with the following detector function of the test receiver and spectrum analyzer.

Frequency	30 MHz - 1000 MHz	1000 MHz - 40 GHz *1)	
Instrument used	Test receiver	Spectrum analyzer	
Detector Type	QP	AV *2)	PK
IF Band width	120 kHz	RBW 1 MHz/ VBW 10 Hz	RBW 1 MHz/ VBW 3 MHz

*1) The measurement data was adjusted to a 3.0 m distance using the following Distance Factor.

Distance Factor: See Figure 2.

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

Figure 1: Antenna angle

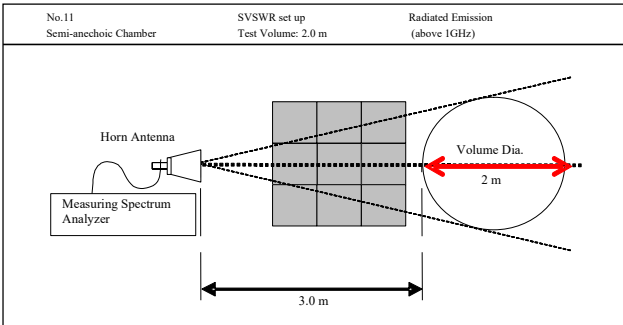
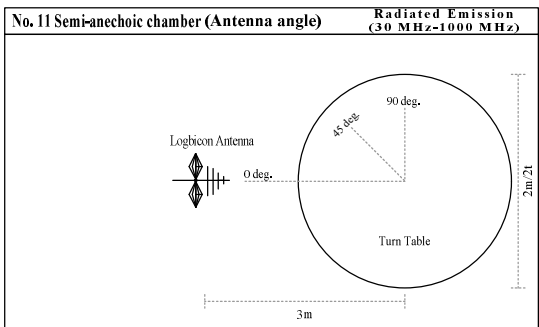
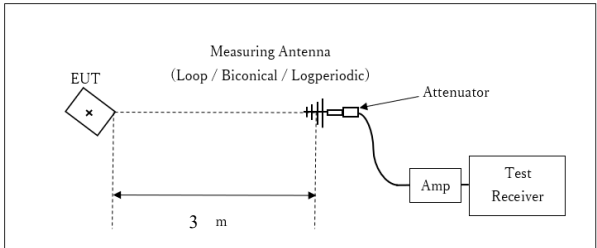


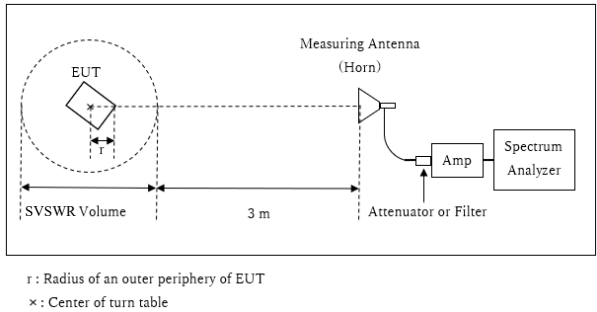
Figure 2: Test Setup

Below 1 GHz



*Test Distance: 3.0 m

1 GHz - 10 GHz



Hi type

Distance Factor: $20 \times \log (3.2 \text{ m} / 3.0 \text{ m}) = 0.56 \text{ dB}$

* Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.2 \text{ m}$

Lo type

Distance Factor: $20 \times \log (3.3 \text{ m} / 3.0 \text{ m}) = 0.83 \text{ dB}$

* Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.3 \text{ m}$

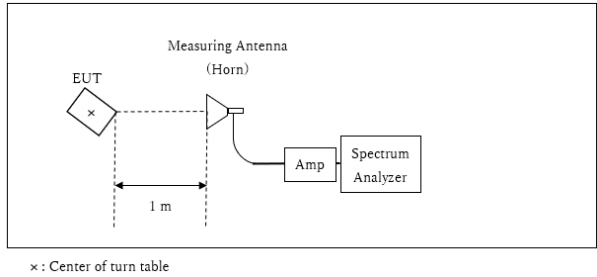
SVSWR Volume : 2.0 m

(SVSWR Volume has been calibrated based on CISPR 16-1-4.)

r = 0.8 m (Hi type)

r = 0.7 m (Lo type)

10 GHz - 26.5 GHz



Distance Factor: $20 \times \log (1.0 \text{ m}^* / 3.0 \text{ m}) = -9.54 \text{ dB}$

*Test Distance: 1 m

UL Japan, Inc.

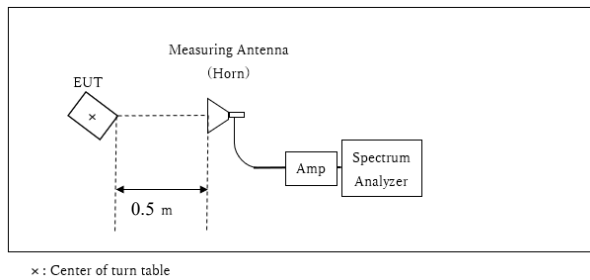
Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

26.5 GHz - 40 GHz



Distance Factor: $20 \times \log (0.5 \text{ m}^* / 3.0 \text{ m}) = -15.56 \text{ dB}$

*Test Distance: 0.5 m

The noise levels were confirmed at each position of 0 deg. 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.

Worst case:

< Hi type (14 inch Display) >

Antenna polarization	Below 1 GHz	1 GHz - 10 GHz	10 GHz - 18 GHz	18 GHz - 26.5 GHz	18 GHz - 40 GHz
Horizontal	0 deg.	0 deg.	0 deg.	0 deg.	0 deg.
Vertical	0 deg.	0 deg.	0 deg.	0 deg.	0 deg.

< Lo type (8 inch Display) >

Antenna polarization	Below 1 GHz	1 GHz - 10 GHz	10 GHz - 18 GHz	18 GHz - 26.5 GHz	18 GHz - 40 GHz
Horizontal	0 deg.	0 deg.	0 deg.	0 deg.	0 deg.
Vertical	0 deg.	0 deg.	0 deg.	0 deg.	0 deg.

5.5 Results

Summary of the test results: Pass

UL Japan, Inc.

Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

Section 6: Antenna Terminal

6.1 Operating environment

Test room : Refer to data
Temperature : Refer to data
Humidity : Refer to data

6.2 Test configuration

EUT was placed on a wooden table of nominal size, 1.0 m by 1.5 m, raised 0.8 m from the ground.

6.3 Test conditions

Frequency range : 30 MHz - 40 GHz
Test distance : N/A
EUT position : Table top

6.4 Test procedure

The Antenna Terminal was measured with a spectrum analyzer connected to the antenna port.

Frequency	Below 1 GHz	Above 1 GHz
Instrument used	Test receiver	Spectrum Analyzer *1)
IF Bandwidth	QP: 120 kHz	PK: RBW: 1 MHz / VBW: 3 MHz

*1) The Spectrum Analyzer was used in 3 dB resolution bandwidth.

6.5 Results

Summary of the test results: Pass

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/22

Company : Panasonic Corporation

Kind of EUT : Car Navigation

Model No. : AT2104, Hi type

Serial No. : 500025

Remarks : Other, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(97.9MHz)_Analog

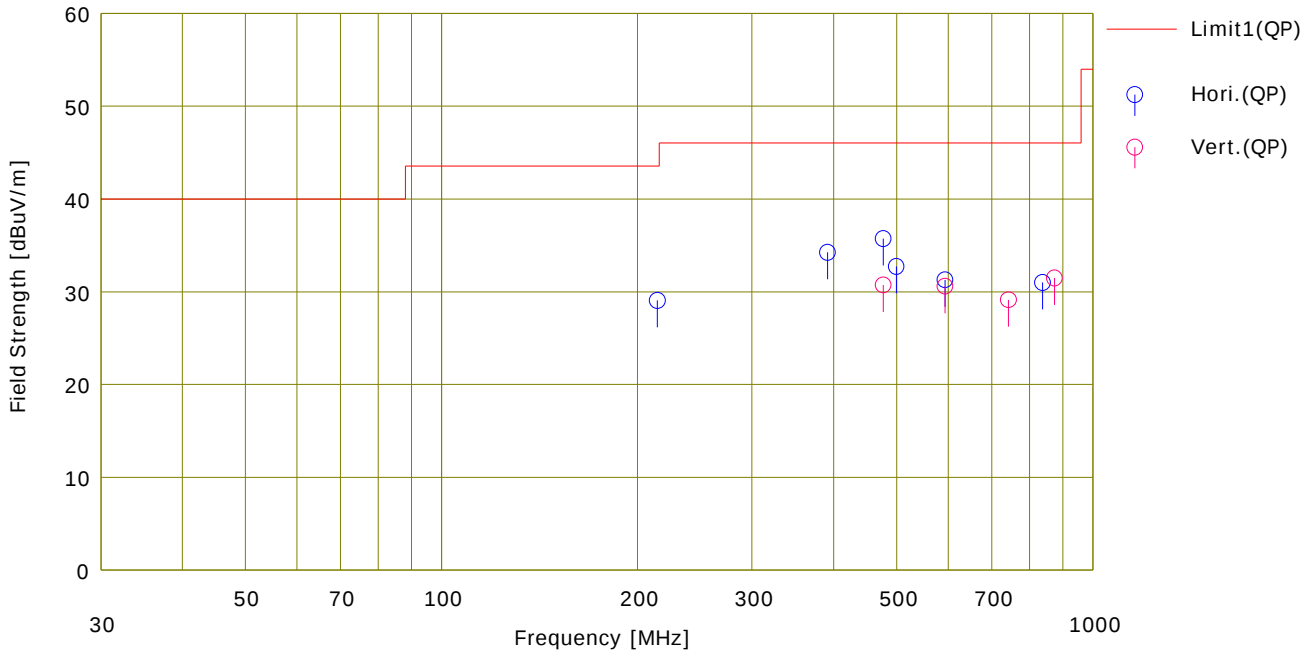
Order No. : 13408125M

Power : DC 13.2 V

Temp./Humi. : 23deg.C. / 52%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa



No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	214.630	44.10	9.97	7.07	32.08	29.06	43.52	14.4	Hori.	163	47	HB	
2	391.702	42.70	15.50	8.02	31.99	34.23	46.02	11.7	Hori.	100	20	HB	
3	476.926	41.80	17.53	8.39	32.00	35.72	46.02	10.3	Hori.	100	322	HB	
4	499.458	38.40	17.85	8.48	32.01	32.72	46.02	13.3	Hori.	100	7	HB	
5	593.200	34.80	19.68	8.85	32.05	31.28	46.02	14.7	Hori.	100	0	HB	
6	837.796	30.30	22.79	9.64	31.74	30.99	46.02	15.0	Hori.	100	164	HB	
7	477.092	36.80	17.53	8.39	32.00	30.72	46.02	15.3	Vert.	100	11	HB	
8	593.197	34.10	19.68	8.85	32.05	30.58	46.02	15.4	Vert.	100	120	HB	
9	742.465	30.00	21.81	9.33	32.01	29.13	46.02	16.8	Vert.	139	352	HB	
10	873.696	30.30	22.97	9.75	31.56	31.46	46.02	14.5	Vert.	122	177	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/22

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(87.75MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 52%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	87.362	22.80	8.08	6.20	32.19	4.89	40.00	35.1	Hori.	200	359	HB	
2	88.138	23.10	8.04	6.21	32.19	5.16	43.52	38.3	Hori.	211	58	HB	
3	174.724	23.70	12.43	6.82	32.12	10.83	43.52	32.6	Hori.	162	277	HB	
4	176.276	23.80	12.22	6.84	32.11	10.75	43.52	32.7	Hori.	154	84	HB	
5	262.086	24.90	12.22	7.33	32.04	12.41	46.02	33.6	Hori.	129	142	HB	
6	264.414	24.80	12.35	7.34	32.04	12.45	46.02	33.5	Hori.	111	139	HB	
7	786.258	27.40	22.30	9.47	31.91	27.26	46.02	18.7	Hori.	121	175	HB	
8	793.242	27.20	22.31	9.49	31.90	27.10	46.02	18.9	Hori.	127	181	HB	
9	873.620	27.20	22.97	9.75	31.56	28.36	46.02	17.6	Hori.	120	111	HB	
10	881.380	28.40	23.08	9.77	31.51	29.74	46.02	16.2	Hori.	186	155	HB	
11	87.362	23.20	8.08	6.20	32.19	5.29	40.00	34.7	Vert.	100	0	HB	
12	88.138	23.90	8.04	6.21	32.19	5.96	43.52	37.5	Vert.	100	0	HB	
13	174.724	24.80	12.43	6.82	32.12	11.93	43.52	31.5	Vert.	100	210	HB	
14	176.276	25.40	12.22	6.84	32.11	12.35	43.52	31.1	Vert.	100	184	HB	
15	262.086	23.90	12.22	7.33	32.04	11.41	46.02	34.6	Vert.	100	310	HB	
16	264.414	23.50	12.35	7.34	32.04	11.15	46.02	34.8	Vert.	100	152	HB	
17	786.258	28.00	22.30	9.47	31.91	27.86	46.02	18.1	Vert.	139	140	HB	
18	793.242	26.70	22.31	9.49	31.90	26.60	46.02	19.4	Vert.	132	134	HB	
19	873.620	29.30	22.97	9.75	31.56	30.46	46.02	15.5	Vert.	100	171	HB	
20	881.380	26.50	23.08	9.77	31.51	27.84	46.02	18.1	Vert.	100	161	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/22

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(97.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 52%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	97.512	24.10	8.60	6.28	32.18	6.80	43.52	36.7	Hori.	269	237	HB	
2	98.288	24.20	8.64	6.29	32.18	6.95	43.52	36.5	Hori.	194	87	HB	
3	195.024	23.70	10.20	6.95	32.09	8.76	43.52	34.7	Hori.	196	245	HB	
4	196.576	23.60	10.11	6.96	32.09	8.58	43.52	34.9	Hori.	167	285	HB	
5	585.072	33.40	19.46	8.82	32.04	29.64	46.02	16.3	Hori.	138	190	HB	
6	589.728	28.80	19.55	8.83	32.05	25.13	46.02	20.8	Hori.	143	187	HB	
7	780.096	29.30	22.22	9.45	31.93	29.04	46.02	16.9	Hori.	118	187	HB	
8	786.304	29.70	22.30	9.47	31.91	29.56	46.02	16.4	Hori.	115	186	HB	
9	877.608	27.90	23.02	9.76	31.54	29.14	46.02	16.8	Hori.	100	142	HB	
10	884.592	26.10	23.12	9.78	31.50	27.50	46.02	18.5	Hori.	100	148	HB	
11	97.512	24.30	8.60	6.28	32.18	7.00	43.52	36.5	Vert.	100	186	HB	
12	98.288	24.70	8.64	6.29	32.18	7.45	43.52	36.0	Vert.	100	123	HB	
13	195.024	24.30	10.20	6.95	32.09	9.36	43.52	34.1	Vert.	100	205	HB	
14	196.576	24.40	10.11	6.96	32.09	9.38	43.52	34.1	Vert.	100	0	HB	
15	585.072	33.70	19.46	8.82	32.04	29.94	46.02	16.0	Vert.	114	38	HB	
16	589.728	27.90	19.55	8.83	32.05	24.23	46.02	21.7	Vert.	100	122	HB	
17	780.096	27.80	22.22	9.45	31.93	27.54	46.02	18.4	Vert.	100	21	HB	
18	786.304	27.60	22.30	9.47	31.91	27.46	46.02	18.5	Vert.	100	13	HB	
19	877.608	27.20	23.02	9.76	31.54	28.44	46.02	17.5	Vert.	100	288	HB	
20	884.592	25.10	23.12	9.78	31.50	26.50	46.02	19.5	Vert.	118	166	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/22

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(107.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C / 52%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	107.512	26.20	10.08	6.36	32.17	10.47	43.52	33.0	Hori.	295	138	HB	
2	108.288	24.10	10.14	6.36	32.17	8.43	43.52	35.0	Hori.	288	142	HB	
3	215.024	44.60	9.97	7.07	32.08	29.56	43.52	13.9	Hori.	164	52	HB	
4	216.576	29.30	9.97	7.08	32.08	14.27	46.02	31.7	Hori.	154	48	HB	
5	322.536	27.70	14.10	7.65	32.01	17.44	46.02	28.5	Hori.	134	91	HB	
6	324.864	29.00	14.16	7.66	32.01	18.81	46.02	27.2	Hori.	144	95	HB	
7	430.048	35.80	16.50	8.20	31.99	28.51	46.02	17.5	Hori.	100	25	HB	
8	433.152	34.30	16.63	8.21	31.99	27.15	46.02	18.8	Hori.	100	29	HB	
9	752.584	25.80	22.08	9.36	31.99	25.25	46.02	20.7	Hori.	100	313	HB	
10	758.016	24.90	22.16	9.38	31.98	24.46	46.02	21.5	Hori.	100	136	HB	
11	860.096	26.50	22.91	9.71	31.63	27.49	46.02	18.5	Hori.	100	158	HB	
12	866.304	27.60	22.94	9.73	31.60	28.67	46.02	17.3	Hori.	100	144	HB	
13	967.608	28.00	24.07	10.04	30.85	31.26	53.97	22.7	Hori.	100	152	HB	
14	974.592	29.00	24.08	10.06	30.77	32.37	53.97	21.6	Hori.	100	149	HB	
15	107.512	24.80	10.08	6.36	32.17	9.07	43.52	34.4	Vert.	100	56	HB	
16	108.288	23.30	10.14	6.36	32.17	7.63	43.52	35.8	Vert.	100	160	HB	
17	215.024	33.70	9.97	7.07	32.08	18.66	43.52	24.8	Vert.	210	40	HB	
18	216.576	23.80	9.97	7.08	32.08	8.77	46.02	37.2	Vert.	100	359	HB	
19	322.536	25.80	14.10	7.65	32.01	15.54	46.02	30.4	Vert.	100	0	HB	
20	324.864	25.90	14.16	7.66	32.01	15.71	46.02	30.3	Vert.	100	337	HB	
21	430.048	32.10	16.50	8.20	31.99	24.81	46.02	21.2	Vert.	154	0	HB	
22	433.152	29.40	16.63	8.21	31.99	22.25	46.02	23.7	Vert.	137	359	HB	
23	752.584	28.80	22.08	9.36	31.99	28.25	46.02	17.7	Vert.	135	0	HB	
24	758.016	26.40	22.16	9.38	31.98	25.96	46.02	20.0	Vert.	134	359	HB	
25	860.096	25.80	22.91	9.71	31.63	26.79	46.02	19.2	Vert.	125	150	HB	
26	866.304	27.20	22.94	9.73	31.60	28.27	46.02	17.7	Vert.	126	162	HB	
27	967.608	25.50	24.07	10.04	30.85	28.76	53.97	25.2	Vert.	128	225	HB	
28	974.592	26.50	24.08	10.06	30.77	29.87	53.97	24.1	Vert.	129	228	HB	

DATA OF RADIATED EMISSION TEST

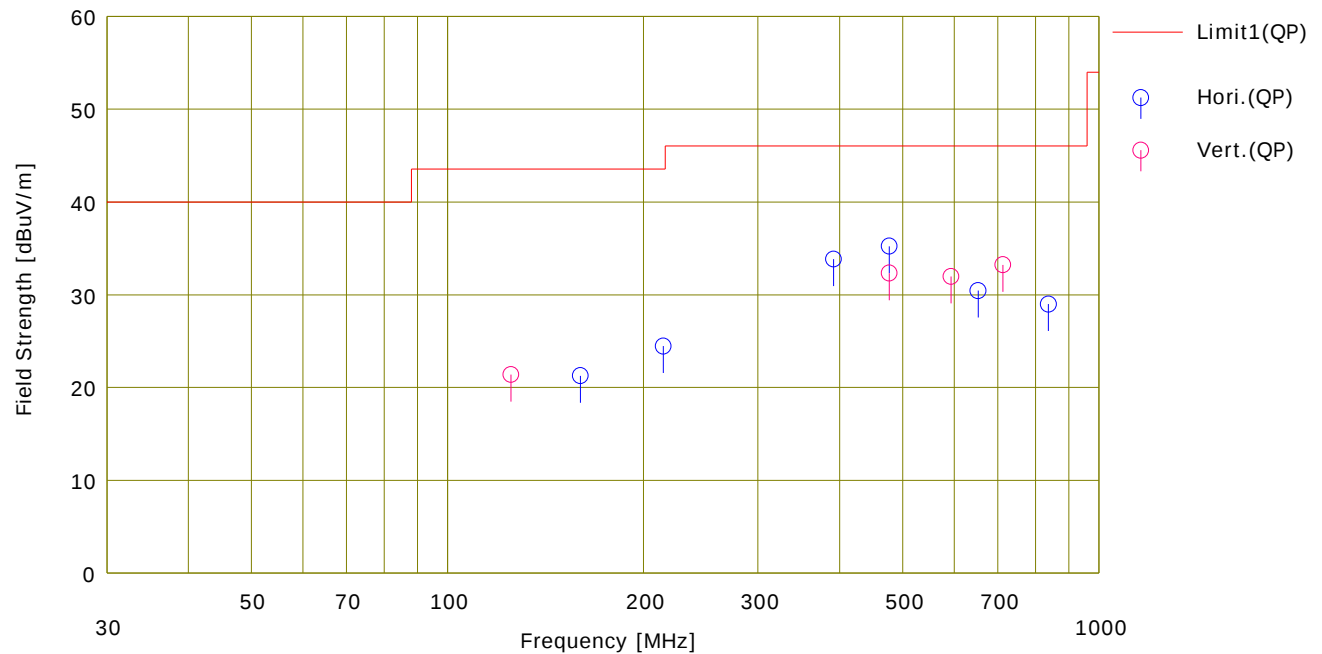
UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/22

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Other, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(97.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 48%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Tomoyuki Watanabe



No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	160.000	33.10	13.57	6.72	32.13	21.26	43.52	22.2	Hori.	254	262	HB	
2	214.530	39.50	9.97	7.07	32.08	24.46	43.52	19.0	Hori.	161	65	HB	
3	391.700	42.30	15.50	8.02	31.99	33.83	46.02	12.1	Hori.	100	24	HB	
4	476.930	41.30	17.53	8.39	32.00	35.22	46.02	10.8	Hori.	100	33	HB	
5	652.830	33.00	20.46	9.04	32.06	30.44	46.02	15.5	Hori.	177	28	HB	
6	837.050	28.30	22.79	9.64	31.74	28.99	46.02	17.0	Hori.	110	182	HB	
7	125.200	35.20	11.87	6.49	32.16	21.40	43.52	22.1	Vert.	100	260	HB	
8	476.970	38.40	17.53	8.39	32.00	32.32	46.02	13.7	Vert.	100	0	HB	
9	593.260	35.50	19.68	8.85	32.05	31.98	46.02	14.0	Vert.	130	30	HB	
10	712.470	35.10	20.93	9.23	32.04	33.22	46.02	12.8	Vert.	100	38	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/22

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(87.75MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 52%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	87.362	23.00	8.08	6.20	32.19	5.09	40.00	34.9	Hori.	221	215	HB	
2	88.138	23.10	8.04	6.21	32.19	5.16	43.52	38.3	Hori.	213	68	HB	
3	174.724	23.40	12.43	6.82	32.12	10.53	43.52	32.9	Hori.	215	248	HB	
4	176.276	24.30	12.22	6.84	32.11	11.25	43.52	32.2	Hori.	205	151	HB	
5	262.086	24.00	12.22	7.33	32.04	11.51	46.02	34.5	Hori.	143	121	HB	
6	264.414	23.60	12.35	7.34	32.04	11.25	46.02	34.7	Hori.	147	210	HB	
7	786.258	28.10	22.30	9.47	31.91	27.96	46.02	18.0	Hori.	100	190	HB	
8	793.242	26.70	22.31	9.49	31.90	26.60	46.02	19.4	Hori.	100	186	HB	
9	873.620	27.00	22.97	9.75	31.56	28.16	46.02	17.8	Hori.	100	153	HB	
10	881.380	26.80	23.08	9.77	31.51	28.14	46.02	17.8	Hori.	100	144	HB	
11	87.362	23.40	8.08	6.20	32.19	5.49	40.00	34.5	Vert.	100	264	HB	
12	88.138	23.70	8.04	6.21	32.19	5.76	43.52	37.7	Vert.	100	241	HB	
13	174.724	23.50	12.43	6.82	32.12	10.63	43.52	32.8	Vert.	100	177	HB	
14	176.276	23.50	12.22	6.84	32.11	10.45	43.52	33.0	Vert.	100	183	HB	
15	262.086	23.20	12.22	7.33	32.04	10.71	46.02	35.3	Vert.	100	178	HB	
16	264.414	22.90	12.35	7.34	32.04	10.55	46.02	35.4	Vert.	100	180	HB	
17	786.258	27.70	22.30	9.47	31.91	27.56	46.02	18.4	Vert.	100	10	HB	
18	793.242	25.00	22.31	9.49	31.90	24.90	46.02	21.1	Vert.	100	10	HB	
19	873.620	27.10	22.97	9.75	31.56	28.26	46.02	17.7	Vert.	100	64	HB	
20	881.380	27.30	23.08	9.77	31.51	28.64	46.02	17.3	Vert.	100	332	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/22

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(97.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 48%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Tomoyuki Watanabe

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	97.512	23.70	8.60	6.28	32.18	6.40	43.52	37.1	Hori.	266	89	HB	
2	98.288	24.20	8.64	6.29	32.18	6.95	43.52	36.5	Hori.	266	92	HB	
3	195.024	23.00	10.20	6.95	32.09	8.06	43.52	35.4	Hori.	200	264	HB	
4	196.576	25.10	10.11	6.96	32.09	10.08	43.52	33.4	Hori.	200	285	HB	
5	585.072	27.40	19.46	8.82	32.04	23.64	46.02	22.3	Hori.	150	188	HB	
6	589.728	26.70	19.55	8.83	32.05	23.03	46.02	22.9	Hori.	142	188	HB	
7	780.096	26.20	22.22	9.45	31.93	25.94	46.02	20.0	Hori.	110	184	HB	
8	786.304	25.30	22.30	9.47	31.91	25.16	46.02	20.8	Hori.	110	184	HB	
9	877.608	26.60	23.02	9.76	31.54	27.84	46.02	18.1	Hori.	287	151	HB	
10	884.592	29.50	23.12	9.78	31.50	30.90	46.02	15.1	Hori.	287	151	HB	
11	97.512	24.40	8.60	6.28	32.18	7.10	43.52	36.4	Vert.	100	237	HB	
12	98.288	26.00	8.64	6.29	32.18	8.75	43.52	34.7	Vert.	100	104	HB	
13	195.024	22.90	10.20	6.95	32.09	7.96	43.52	35.5	Vert.	100	0	HB	
14	196.576	30.70	10.11	6.96	32.09	15.68	43.52	27.8	Vert.	100	0	HB	
15	585.072	29.80	19.46	8.82	32.04	26.04	46.02	19.9	Vert.	123	25	HB	
16	589.728	27.30	19.55	8.83	32.05	23.63	46.02	22.3	Vert.	123	40	HB	
17	780.096	25.80	22.22	9.45	31.93	25.54	46.02	20.4	Vert.	115	10	HB	
18	786.304	25.90	22.30	9.47	31.91	25.76	46.02	20.2	Vert.	110	0	HB	
19	877.608	25.30	23.02	9.76	31.54	26.54	46.02	19.4	Vert.	120	148	HB	
20	884.592	27.90	23.12	9.78	31.50	29.30	46.02	16.7	Vert.	108	179	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/22

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(107.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 52%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	107.512	26.00	10.08	6.36	32.17	10.27	43.52	33.2	Hori.	274	100	HB	
2	108.288	23.90	10.14	6.36	32.17	8.23	43.52	35.2	Hori.	280	116	HB	
3	215.024	39.40	9.97	7.07	32.08	24.36	43.52	19.1	Hori.	159	52	HB	
4	216.576	26.70	9.97	7.08	32.08	11.67	46.02	34.3	Hori.	144	50	HB	
5	322.536	25.20	14.10	7.65	32.01	14.94	46.02	31.0	Hori.	100	207	HB	
6	324.864	23.30	14.16	7.66	32.01	13.11	46.02	32.9	Hori.	100	30	HB	
7	430.048	33.80	16.50	8.20	31.99	26.51	46.02	19.5	Hori.	100	24	HB	
8	433.152	33.10	16.63	8.21	31.99	25.95	46.02	20.0	Hori.	100	25	HB	
9	752.584	26.00	22.08	9.36	31.99	25.45	46.02	20.5	Hori.	126	329	HB	
10	758.016	23.90	22.16	9.38	31.98	23.46	46.02	22.5	Hori.	134	141	HB	
11	860.096	25.10	22.91	9.71	31.63	26.09	46.02	19.9	Hori.	100	163	HB	
12	866.304	26.90	22.94	9.73	31.60	27.97	46.02	18.0	Hori.	111	148	HB	
13	967.608	26.40	24.07	10.04	30.85	29.66	53.97	24.3	Hori.	165	163	HB	
14	974.592	29.30	24.08	10.06	30.77	32.67	53.97	21.3	Hori.	161	160	HB	
15	107.512	26.30	10.08	6.36	32.17	10.57	43.52	32.9	Vert.	100	95	HB	
16	108.288	23.50	10.14	6.36	32.17	7.83	43.52	35.6	Vert.	100	239	HB	
17	215.024	27.60	9.97	7.07	32.08	12.56	43.52	30.9	Vert.	100	40	HB	
18	216.576	23.10	9.97	7.08	32.08	8.07	46.02	37.9	Vert.	100	0	HB	
19	322.536	23.20	14.10	7.65	32.01	12.94	46.02	33.0	Vert.	100	185	HB	
20	324.864	22.60	14.16	7.66	32.01	12.41	46.02	33.6	Vert.	100	172	HB	
21	430.048	29.30	16.50	8.20	31.99	22.01	46.02	24.0	Vert.	100	0	HB	
22	433.152	27.80	16.63	8.21	31.99	20.65	46.02	25.3	Vert.	100	0	HB	
23	752.584	27.90	22.08	9.36	31.99	27.35	46.02	18.6	Vert.	128	359	HB	
24	758.016	25.90	22.16	9.38	31.98	25.46	46.02	20.5	Vert.	139	0	HB	
25	860.096	24.80	22.91	9.71	31.63	25.79	46.02	20.2	Vert.	100	324	HB	
26	866.304	26.60	22.94	9.73	31.60	27.67	46.02	18.3	Vert.	100	334	HB	
27	967.608	23.60	24.07	10.04	30.85	26.86	53.97	27.1	Vert.	100	229	HB	
28	974.592	24.00	24.08	10.06	30.77	27.37	53.97	26.6	Vert.	100	241	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

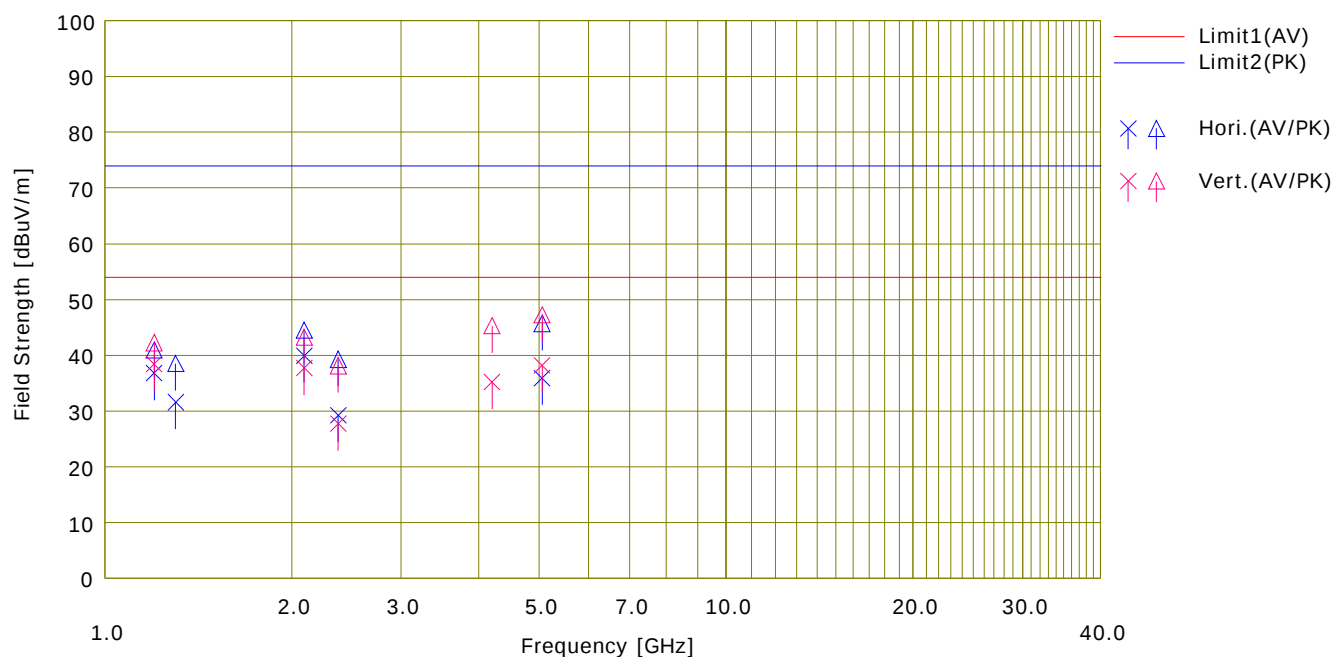
Date :2020/08/23

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Other, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=320 cm

Mode : FM Receiving(97.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 55%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Makoto Ebato



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> [dBuV]	<PK> [dBuV]					<AV> [dBuV/m]	<PK> [dBuV/m]	<AV> [dBuV/m]	<PK> [dBuV/m]	<AV> [dB]	<PK> [dB]					
1	1200.000	52.88	57.01	24.42	2.30	43.39	0.56	36.77	40.90	53.97	73.97	17.2	33.0	Hori.	100	143	Horn	
2	1300.000	47.14	54.05	24.95	2.39	43.47	0.56	31.57	38.48	53.97	73.97	22.4	35.4	Hori.	252	137	Horn	
3	2091.914	51.12	55.62	29.07	3.06	43.86	0.56	39.95	44.45	53.97	73.97	14.0	29.5	Hori.	100	148	Horn	
4	2375.000	41.70	51.72	27.57	3.28	43.85	0.56	29.26	39.28	53.97	73.97	24.7	34.6	Hori.	100	176	Horn	
5	5057.813	43.13	52.90	32.68	4.87	45.31	0.56	35.93	45.70	53.97	73.97	18.0	28.2	Hori.	100	233	Horn	
6	1200.000	54.55	58.36	24.42	2.30	43.39	0.56	38.44	42.25	53.97	73.97	15.5	31.7	Vert.	274	184	Horn	
7	2091.786	48.90	54.43	29.07	3.06	43.86	0.56	37.73	43.26	53.97	73.97	16.2	30.7	Vert.	100	47	Horn	
8	2375.000	40.17	50.56	27.57	3.28	43.85	0.56	27.73	38.12	53.97	73.97	26.2	35.8	Vert.	194	199	Horn	
9	4200.000	42.47	52.56	32.34	4.42	44.59	0.56	35.20	45.29	53.97	73.97	18.7	28.6	Vert.	299	3	Horn	
10	5057.801	45.43	54.50	32.68	4.87	45.31	0.56	38.23	47.30	53.97	73.97	15.7	26.6	Vert.	229	166	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/23

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=320 cm
Mode : FM Receiving(87.75MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 55%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Makoto Ebato

<< 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]		[cm]	[deg]		
1	1850.898	37.98	50.58	26.01	2.87	43.82	0.56	23.60	36.20	53.97	73.97	30.3	37.7	Hori.	100	146	Horn	
2	2115.312	38.56	50.28	28.89	3.08	43.87	0.56	27.22	38.94	53.97	73.97	26.7	35.0	Hori.	230	242	Horn	
3	3172.968	37.85	50.13	29.58	3.81	43.86	0.56	27.94	40.22	53.97	73.97	26.0	33.7	Hori.	100	0	Horn	
4	3437.382	37.96	50.32	30.12	3.98	44.00	0.56	28.62	40.98	53.97	73.97	25.3	32.9	Hori.	100	0	Horn	
5	3525.520	56.44	58.81	30.35	4.03	44.03	0.56	47.35	49.72	53.97	73.97	6.6	24.2	Hori.	100	178	Horn	
6	4406.900	39.23	50.31	32.07	4.53	44.78	0.56	31.61	42.69	53.97	73.97	22.3	31.2	Hori.	100	0	Horn	
7	5200.142	40.16	52.79	32.70	4.95	45.41	0.56	32.96	45.59	53.97	73.97	21.0	28.3	Hori.	100	152	Horn	
8	1850.898	37.76	49.70	26.01	2.87	43.82	0.56	23.38	35.32	53.97	73.97	30.5	38.6	Vert.	100	0	Horn	
9	2115.312	38.35	50.46	28.89	3.08	43.87	0.56	27.01	39.12	53.97	73.97	26.9	34.8	Vert.	100	143	Horn	
10	3172.968	37.84	49.74	29.58	3.81	43.86	0.56	27.93	39.83	53.97	73.97	26.0	34.1	Vert.	100	117	Horn	
11	3437.382	37.87	49.98	30.12	3.98	44.00	0.56	28.53	40.64	53.97	73.97	25.4	33.3	Vert.	100	0	Horn	
12	3525.520	55.09	57.65	30.35	4.03	44.03	0.56	46.00	48.56	53.97	73.97	7.9	25.4	Vert.	209	243	Horn	
13	4406.900	39.18	51.74	32.07	4.53	44.78	0.56	31.56	44.12	53.97	73.97	22.4	29.8	Vert.	100	164	Horn	
14	5200.142	40.06	52.06	32.70	4.95	45.41	0.56	32.86	44.86	53.97	73.97	21.1	29.1	Vert.	100	144	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/23

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=320 cm
Mode : FM Receiving(97.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 55%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Makoto Ebato

<< 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]		[cm]	[deg]		
1	1950.240	38.70	50.08	27.81	2.95	43.78	0.56	26.24	37.62	53.97	73.97	27.7	36.3	Hori.	191	231	Horn	
2	2340.288	37.78	49.47	27.51	3.24	43.86	0.56	25.23	36.92	53.97	73.97	28.7	37.0	Hori.	100	0	Horn	
3	3120.384	37.99	49.83	29.46	3.77	43.83	0.56	27.95	39.79	53.97	73.97	26.0	34.1	Hori.	100	0	Horn	
4	3510.432	54.93	57.98	30.30	4.02	44.02	0.56	45.79	48.84	53.97	73.97	8.1	25.1	Hori.	116	176	Horn	
5	4875.600	39.30	51.03	32.57	4.78	45.21	0.56	32.00	43.73	53.97	73.97	21.9	30.2	Hori.	100	0	Horn	
6	5310.432	39.01	50.71	32.90	5.00	45.43	0.56	32.04	43.74	53.97	73.97	21.9	30.2	Hori.	100	0	Horn	
7	5753.208	39.62	51.78	33.77	5.23	45.44	0.56	33.74	45.90	53.97	73.97	20.2	28.0	Hori.	100	0	Horn	
8	1950.240	39.41	50.09	27.81	2.95	43.78	0.56	26.95	37.63	53.97	73.97	27.0	36.3	Vert.	309	227	Horn	
9	2340.288	37.76	49.81	27.51	3.24	43.86	0.56	25.21	37.26	53.97	73.97	28.7	36.7	Vert.	100	0	Horn	
10	3120.384	38.00	49.50	29.46	3.77	43.83	0.56	27.96	39.46	53.97	73.97	26.0	34.5	Vert.	100	0	Horn	
11	3510.432	55.02	57.86	30.30	4.02	44.02	0.56	45.88	48.72	53.97	73.97	8.0	25.2	Vert.	157	244	Horn	
12	4875.600	39.55	51.06	32.57	4.78	45.21	0.56	32.25	43.76	53.97	73.97	21.7	30.2	Vert.	100	0	Horn	
13	5310.432	39.04	50.80	32.90	5.00	45.43	0.56	32.07	43.83	53.97	73.97	21.9	30.1	Vert.	100	0	Horn	
14	5753.208	39.66	51.54	33.77	5.23	45.44	0.56	33.78	45.66	53.97	73.97	20.1	28.3	Vert.	100	0	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/23

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=320 cm
Mode : FM Receiving(107.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 55%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Makoto Ebato

<< AV/PK DATA >>

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	1732.608	38.58	50.39	25.41	2.78	43.86	0.56	23.47	35.28	53.97	73.97	30.5	38.6	Hori.	100	221	Horn	
2	2165.760	38.41	50.04	28.42	3.12	43.89	0.56	26.62	38.25	53.97	73.97	27.3	35.7	Hori.	245	119	Horn	
3	3465.216	53.57	57.32	30.16	4.00	44.00	0.56	44.29	48.04	53.97	73.97	9.6	25.9	Hori.	111	180	Horn	
4	3898.368	39.20	51.12	31.91	4.25	44.35	0.56	31.57	43.49	53.97	73.97	22.4	30.4	Hori.	100	192	Horn	
5	4223.232	39.63	51.02	32.28	4.43	44.60	0.56	32.30	43.69	53.97	73.97	21.6	30.2	Hori.	100	180	Horn	
6	5414.400	39.55	51.58	33.12	5.07	45.45	0.56	32.85	44.88	53.97	73.97	21.1	29.0	Hori.	100	0	Horn	
7	5955.840	40.08	51.90	34.83	5.33	45.30	0.56	35.50	47.32	53.97	73.97	18.4	26.6	Hori.	100	0	Horn	
8	1732.608	38.36	50.42	25.41	2.78	43.86	0.56	23.25	35.31	53.97	73.97	30.7	38.6	Vert.	100	265	Horn	
9	2165.760	38.39	50.34	28.42	3.12	43.89	0.56	26.60	38.55	53.97	73.97	27.3	35.4	Vert.	199	244	Horn	
10	3465.216	56.54	59.43	30.16	4.00	44.00	0.56	47.26	50.15	53.97	73.97	6.7	23.8	Vert.	100	241	Horn	
11	3898.368	39.00	51.04	31.91	4.25	44.35	0.56	31.37	43.41	53.97	73.97	22.6	30.5	Vert.	100	0	Horn	
12	4223.232	39.52	50.55	32.28	4.43	44.60	0.56	32.19	43.22	53.97	73.97	21.7	30.7	Vert.	100	0	Horn	
13	5414.400	39.45	51.21	33.12	5.07	45.45	0.56	32.75	44.51	53.97	73.97	21.2	29.4	Vert.	100	142	Horn	
14	5955.840	40.00	52.11	34.83	5.33	45.30	0.56	35.42	47.53	53.97	73.97	18.5	26.4	Vert.	100	0	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

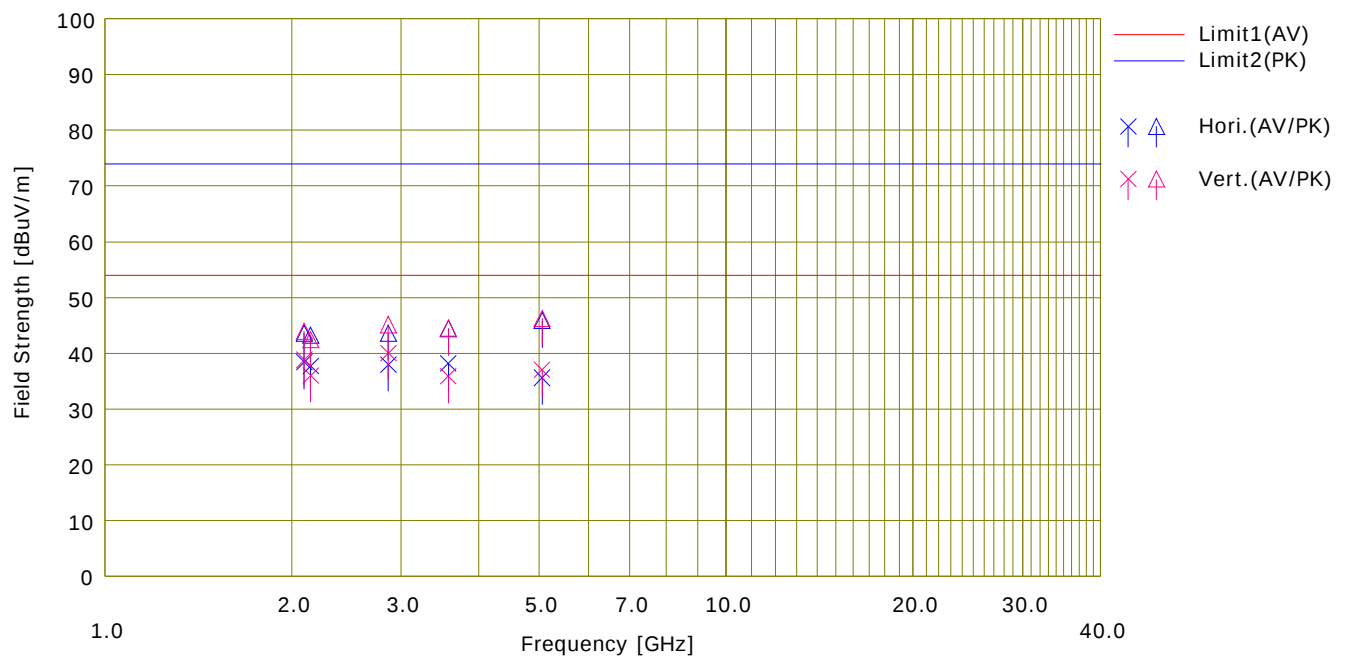
Date :2020/08/23

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Other, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=320 cm

Mode : FM Receiving(97.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C / 55%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Makoto Ebato



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> [dBuV]	<PK> [dBuV]					<AV> [dBuV/m]	<PK> [dBuV/m]	<AV> [dBuV/m]	<PK> [dBuV/m]	<AV> [dB]	<PK> [dB]					
1	2092.227	49.59	54.79	29.07	3.06	43.86	0.56	38.42	43.62	53.97	73.97	15.5	30.3	Hori.	100	153	Horn	
2	2143.282	49.28	54.86	28.64	3.11	43.89	0.56	37.70	43.28	53.97	73.97	16.2	30.6	Hori.	100	356	Horn	
3	2857.703	48.83	54.44	28.74	3.60	43.76	0.56	37.97	43.58	53.97	73.97	16.0	30.3	Hori.	244	43	Horn	
4	3572.094	47.16	53.44	30.44	4.05	44.06	0.56	38.15	44.43	53.97	73.97	15.8	29.5	Hori.	167	57	Horn	
5	5057.805	42.81	53.05	32.68	4.87	45.31	0.56	35.61	45.85	53.97	73.97	18.3	28.1	Hori.	100	233	Horn	
6	2092.081	50.00	55.09	29.07	3.06	43.86	0.56	38.83	43.92	53.97	73.97	15.1	30.0	Vert.	325	189	Horn	
7	2143.277	47.61	54.01	28.64	3.11	43.89	0.56	36.03	42.43	53.97	73.97	17.9	31.5	Vert.	173	341	Horn	
8	2857.690	50.93	56.00	28.74	3.60	43.76	0.56	40.07	45.14	53.97	73.97	13.9	28.8	Vert.	289	19	Horn	
9	3572.110	44.87	53.47	30.44	4.05	44.06	0.56	35.86	44.46	53.97	73.97	18.1	29.5	Vert.	115	345	Horn	
10	5057.834	44.22	53.44	32.68	4.87	45.31	0.56	37.02	46.24	53.97	73.97	16.9	27.7	Vert.	302	175	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/23

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=320 cm

Mode : FM Receiving(87.75MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 55%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Makoto Ebato

<< 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]		[cm]	[deg]		
1	1850.898	37.89	50.53	26.01	2.87	43.82	0.56	23.51	36.15	53.97	73.97	30.4	37.8	Hori.	100	140	Horn	
2	2115.312	38.74	50.83	28.89	3.08	43.87	0.56	27.40	39.49	53.97	73.97	26.5	34.4	Hori.	264	234	Horn	
3	3172.968	37.82	49.73	29.58	3.81	43.86	0.56	27.91	39.82	53.97	73.97	26.0	34.1	Hori.	100	0	Horn	
4	3437.382	37.91	50.00	30.12	3.98	44.00	0.56	28.57	40.66	53.97	73.97	25.4	33.3	Hori.	100	0	Horn	
5	3525.520	55.85	58.68	30.35	4.03	44.03	0.56	46.76	49.59	53.97	73.97	7.2	24.3	Hori.	119	177	Horn	
6	4406.900	39.00	50.92	32.07	4.53	44.78	0.56	31.38	43.30	53.97	73.97	22.5	30.6	Hori.	100	0	Horn	
7	5200.142	39.94	52.15	32.70	4.95	45.41	0.56	32.74	44.95	53.97	73.97	21.2	29.0	Hori.	100	182	Horn	
8	1850.898	37.74	49.92	26.01	2.87	43.82	0.56	23.36	35.54	53.97	73.97	30.6	38.4	Vert.	100	0	Horn	
9	2115.312	38.97	50.00	28.89	3.08	43.87	0.56	27.63	38.66	53.97	73.97	26.3	35.3	Vert.	181	200	Horn	
10	3172.968	37.90	50.89	29.58	3.81	43.86	0.56	27.99	40.98	53.97	73.97	25.9	32.9	Vert.	100	158	Horn	
11	3437.382	37.94	50.83	30.12	3.98	44.00	0.56	28.60	41.49	53.97	73.97	25.3	32.4	Vert.	100	0	Horn	
12	3525.520	54.99	58.41	30.35	4.03	44.03	0.56	45.90	49.32	53.97	73.97	8.0	24.6	Vert.	165	244	Horn	
13	4406.900	39.04	51.50	32.07	4.53	44.78	0.56	31.42	43.88	53.97	73.97	22.5	30.0	Vert.	100	148	Horn	
14	5200.142	39.92	51.72	32.70	4.95	45.41	0.56	32.72	44.52	53.97	73.97	21.2	29.4	Vert.	100	0	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/23

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=320 cm
Mode : FM Receiving(97.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C / 55%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Makoto Ebato

<< 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	1950.240	39.26	50.11	27.81	2.95	43.78	0.56	26.80	37.65	53.97	73.97	27.1	36.3	Hori.	264	218	Horn	
2	2340.288	37.82	49.82	27.51	3.24	43.86	0.56	25.27	37.27	53.97	73.97	28.7	36.7	Hori.	100	0	Horn	
3	3120.384	38.09	50.06	29.46	3.77	43.83	0.56	28.05	40.02	53.97	73.97	25.9	33.9	Hori.	100	167	Horn	
4	3510.432	55.55	58.25	30.30	4.02	44.02	0.56	46.41	49.11	53.97	73.97	7.5	24.8	Hori.	131	178	Horn	
5	4875.600	39.22	51.47	32.57	4.78	45.21	0.56	31.92	44.17	53.97	73.97	22.0	29.8	Hori.	100	0	Horn	
6	5310.432	38.99	50.78	32.90	5.00	45.43	0.56	32.02	43.81	53.97	73.97	21.9	30.1	Hori.	100	0	Horn	
7	5753.208	39.58	51.60	33.77	5.23	45.44	0.56	33.70	45.72	53.97	73.97	20.2	28.2	Hori.	100	0	Horn	
8	1950.240	39.43	50.50	27.81	2.95	43.78	0.56	26.97	38.04	53.97	73.97	27.0	35.9	Vert.	100	225	Horn	
9	2340.288	37.83	49.73	27.51	3.24	43.86	0.56	25.28	37.18	53.97	73.97	28.6	36.7	Vert.	100	0	Horn	
10	3120.384	38.05	49.84	29.46	3.77	43.83	0.56	28.01	39.80	53.97	73.97	25.9	34.1	Vert.	100	167	Horn	
11	3510.432	55.08	58.00	30.30	4.02	44.02	0.56	45.94	48.86	53.97	73.97	8.0	25.1	Vert.	167	243	Horn	
12	4875.600	39.37	50.71	32.57	4.78	45.21	0.56	32.07	43.41	53.97	73.97	21.9	30.5	Vert.	100	0	Horn	
13	5310.432	38.96	50.90	32.90	5.00	45.43	0.56	31.99	43.93	53.97	73.97	21.9	30.0	Vert.	100	0	Horn	
14	5753.208	39.60	51.48	33.77	5.23	45.44	0.56	33.72	45.60	53.97	73.97	20.2	28.3	Vert.	100	0	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/23

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=320 cm
Mode : FM Receiving(107.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 55%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Makoto Ebato

<< AV/PK DATA >>

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	1732.608	38.41	50.25	25.41	2.78	43.86	0.56	23.30	35.14	53.97	73.97	30.6	38.8	Hori.	100	225	Horn	
2	2165.760	38.34	50.41	28.42	3.12	43.89	0.56	26.55	38.62	53.97	73.97	27.4	35.3	Hori.	242	116	Horn	
3	3465.216	55.91	58.89	30.16	4.00	44.00	0.56	46.63	49.61	53.97	73.97	7.3	24.3	Hori.	100	180	Horn	
4	3898.368	39.08	51.34	31.91	4.25	44.35	0.56	31.45	43.71	53.97	73.97	22.5	30.2	Hori.	100	0	Horn	
5	4223.232	39.60	51.08	32.28	4.43	44.60	0.56	32.27	43.75	53.97	73.97	21.7	30.2	Hori.	100	221	Horn	
6	5414.400	39.50	51.55	33.12	5.07	45.45	0.56	32.80	44.85	53.97	73.97	21.1	29.1	Hori.	100	0	Horn	
7	5955.840	40.01	52.00	34.83	5.33	45.30	0.56	35.43	47.42	53.97	73.97	18.5	26.5	Hori.	100	0	Horn	
8	1732.608	38.48	50.75	25.41	2.78	43.86	0.56	23.37	35.64	53.97	73.97	30.6	38.3	Vert.	100	229	Horn	
9	2165.760	38.37	50.86	28.42	3.12	43.89	0.56	26.58	39.07	53.97	73.97	27.3	34.9	Vert.	199	254	Horn	
10	3465.216	55.67	58.80	30.16	4.00	44.00	0.56	46.39	49.52	53.97	73.97	7.5	24.4	Vert.	100	246	Horn	
11	3898.368	39.06	50.82	31.91	4.25	44.35	0.56	31.43	43.19	53.97	73.97	22.5	30.7	Vert.	100	0	Horn	
12	4223.232	39.52	51.45	32.28	4.43	44.60	0.56	32.19	44.12	53.97	73.97	21.7	29.8	Vert.	100	0	Horn	
13	5414.400	39.46	51.22	33.12	5.07	45.45	0.56	32.76	44.52	53.97	73.97	21.2	29.4	Vert.	100	0	Horn	
14	5955.840	39.98	51.98	34.83	5.33	45.30	0.56	35.40	47.40	53.97	73.97	18.5	26.5	Vert.	100	0	Horn	

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

DATA OF RADIATED EMISSION TEST

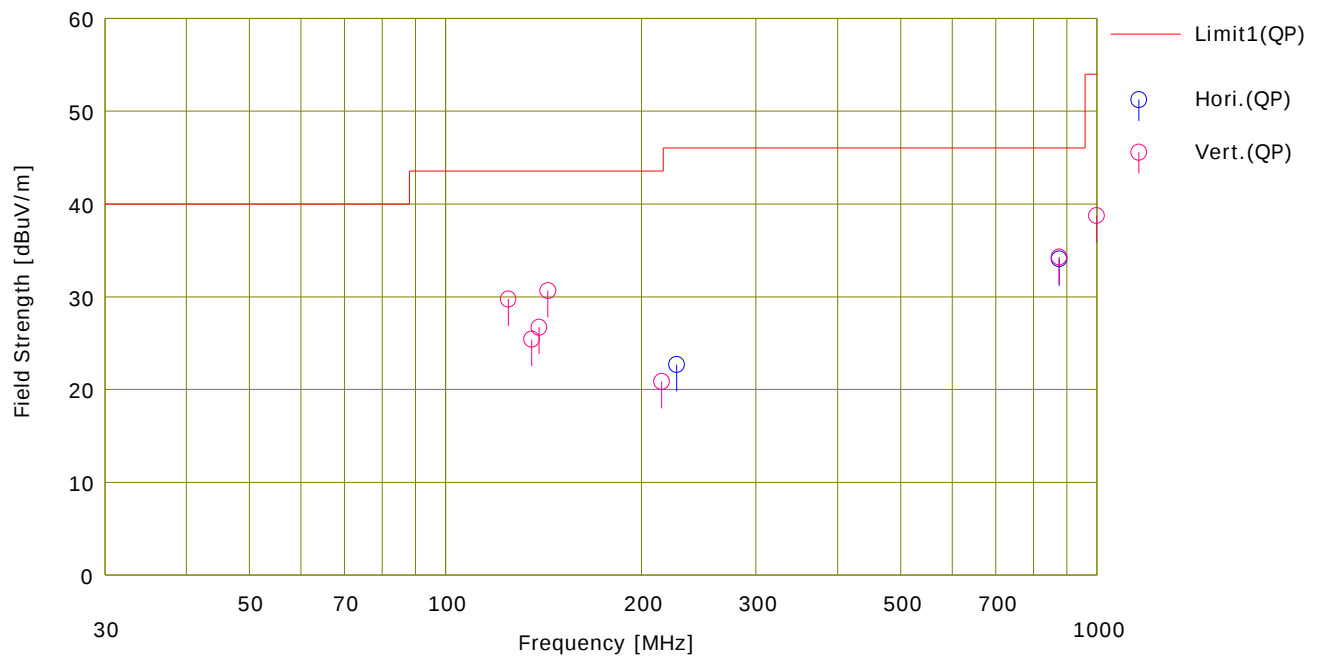
UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/21

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Other, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(97.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 22deg.C / 51%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa



No.	Freq. [MHz]	Reading <QP>	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result <QP>	Limit <QP>	Margin <QP>	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	226.538	37.50	10.12	7.14	32.07	22.69	46.02	23.3	Hori.	192	95	HB	
2	874.998	32.90	22.98	9.75	31.55	34.08	46.02	11.9	Hori.	100	143	HB	
3	124.900	43.60	11.81	6.49	32.16	29.74	43.52	13.7	Vert.	100	240	HB	
4	135.632	38.20	12.80	6.56	32.15	25.41	43.52	18.1	Vert.	100	211	HB	
5	139.156	39.20	13.06	6.59	32.15	26.70	43.52	16.8	Vert.	100	208	HB	
6	143.799	42.80	13.37	6.62	32.14	30.65	43.52	12.8	Vert.	100	241	HB	
7	214.774	35.90	9.97	7.07	32.08	20.86	43.52	22.6	Vert.	100	222	HB	
8	874.997	33.10	22.98	9.75	31.55	34.28	46.02	11.7	Vert.	122	192	HB	
9	999.999	35.00	24.09	10.14	30.50	38.73	53.97	15.2	Vert.	117	213	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/21

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(87.75MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 22deg.C. / 51%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	87.362	23.20	8.08	6.20	32.19	5.29	40.00	34.7	Hori.	239	286	HB	
2	88.138	23.20	8.04	6.21	32.19	5.26	43.52	38.2	Hori.	204	262	HB	
3	174.724	27.00	12.43	6.82	32.12	14.13	43.52	29.3	Hori.	162	255	HB	
4	176.276	26.10	12.22	6.84	32.11	13.05	43.52	30.4	Hori.	199	260	HB	
5	262.086	29.30	12.22	7.33	32.04	16.81	46.02	29.2	Hori.	130	135	HB	
6	786.258	23.30	22.30	9.47	31.91	23.16	46.02	22.8	Hori.	121	202	HB	
7	873.620	23.90	22.97	9.75	31.56	25.06	46.02	20.9	Hori.	111	176	HB	
8	87.362	23.30	8.08	6.20	32.19	5.39	40.00	34.6	Vert.	100	0	HB	
9	88.138	23.20	8.04	6.21	32.19	5.26	43.52	38.2	Vert.	100	0	HB	
10	174.724	26.30	12.43	6.82	32.12	13.43	43.52	30.0	Vert.	100	181	HB	
11	176.276	26.00	12.22	6.84	32.11	12.95	43.52	30.5	Vert.	100	178	HB	
12	262.086	24.90	12.22	7.33	32.04	12.41	46.02	33.6	Vert.	214	164	HB	
13	786.258	23.60	22.30	9.47	31.91	23.46	46.02	22.5	Vert.	100	0	HB	
14	873.620	24.20	22.97	9.75	31.56	25.36	46.02	20.6	Vert.	206	347	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/21

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(97.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 22deg.C. / 51%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	97.512	23.50	8.60	6.28	32.18	6.20	43.52	37.3	Hori.	204	134	HB	
2	98.288	23.30	8.64	6.29	32.18	6.05	43.52	37.4	Hori.	221	300	HB	
3	195.024	31.80	10.20	6.95	32.09	16.86	43.52	26.6	Hori.	185	218	HB	
4	196.576	29.20	10.11	6.96	32.09	14.18	43.52	29.3	Hori.	211	231	HB	
5	390.048	24.40	15.47	8.01	31.99	15.89	46.02	30.1	Hori.	103	340	HB	
6	682.584	23.30	20.65	9.13	32.05	21.03	46.02	24.9	Hori.	137	204	HB	
7	877.608	23.20	23.02	9.76	31.54	24.44	46.02	21.5	Hori.	127	0	HB	
8	97.512	25.50	8.60	6.28	32.18	8.20	43.52	35.3	Vert.	100	149	HB	
9	98.288	24.20	8.64	6.29	32.18	6.95	43.52	36.5	Vert.	100	99	HB	
10	195.024	30.50	10.20	6.95	32.09	15.56	43.52	27.9	Vert.	100	204	HB	
11	196.576	25.80	10.11	6.96	32.09	10.78	43.52	32.7	Vert.	100	230	HB	
12	390.048	23.40	15.47	8.01	31.99	14.89	46.02	31.1	Vert.	100	328	HB	
13	682.584	23.00	20.65	9.13	32.05	20.73	46.02	25.2	Vert.	100	0	HB	
14	877.608	23.20	23.02	9.76	31.54	24.44	46.02	21.5	Vert.	100	1	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/21

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(107.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 22deg.C / 51%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Mitsuhiro Jitsukawa

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	107.512	23.10	10.08	6.36	32.17	7.37	43.52	36.1	Hori.	276	124	HB	
2	108.288	23.00	10.14	6.36	32.17	7.33	43.52	36.1	Hori.	284	243	HB	
3	215.024	29.50	9.97	7.07	32.08	14.46	43.52	29.0	Hori.	168	100	HB	
4	216.576	35.30	9.97	7.08	32.08	20.27	46.02	25.7	Hori.	175	123	HB	
5	324.864	28.50	14.16	7.66	32.01	18.31	46.02	27.7	Hori.	156	89	HB	
6	645.072	22.90	20.46	9.01	32.06	20.31	46.02	25.7	Hori.	166	247	HB	
7	860.096	22.80	22.91	9.71	31.63	23.79	46.02	22.2	Hori.	132	29	HB	
8	107.512	23.50	10.08	6.36	32.17	7.77	43.52	35.7	Vert.	100	130	HB	
9	108.288	23.00	10.14	6.36	32.17	7.33	43.52	36.1	Vert.	100	107	HB	
10	215.024	28.20	9.97	7.07	32.08	13.16	43.52	30.3	Vert.	100	213	HB	
11	216.576	33.70	9.97	7.08	32.08	18.67	46.02	27.3	Vert.	100	213	HB	
12	324.864	28.20	14.16	7.66	32.01	18.01	46.02	28.0	Vert.	100	269	HB	
13	645.072	22.70	20.46	9.01	32.06	20.11	46.02	25.9	Vert.	100	237	HB	
14	860.096	23.60	22.91	9.71	31.63	24.59	46.02	21.4	Vert.	100	0	HB	

DATA OF RADIATED EMISSION TEST

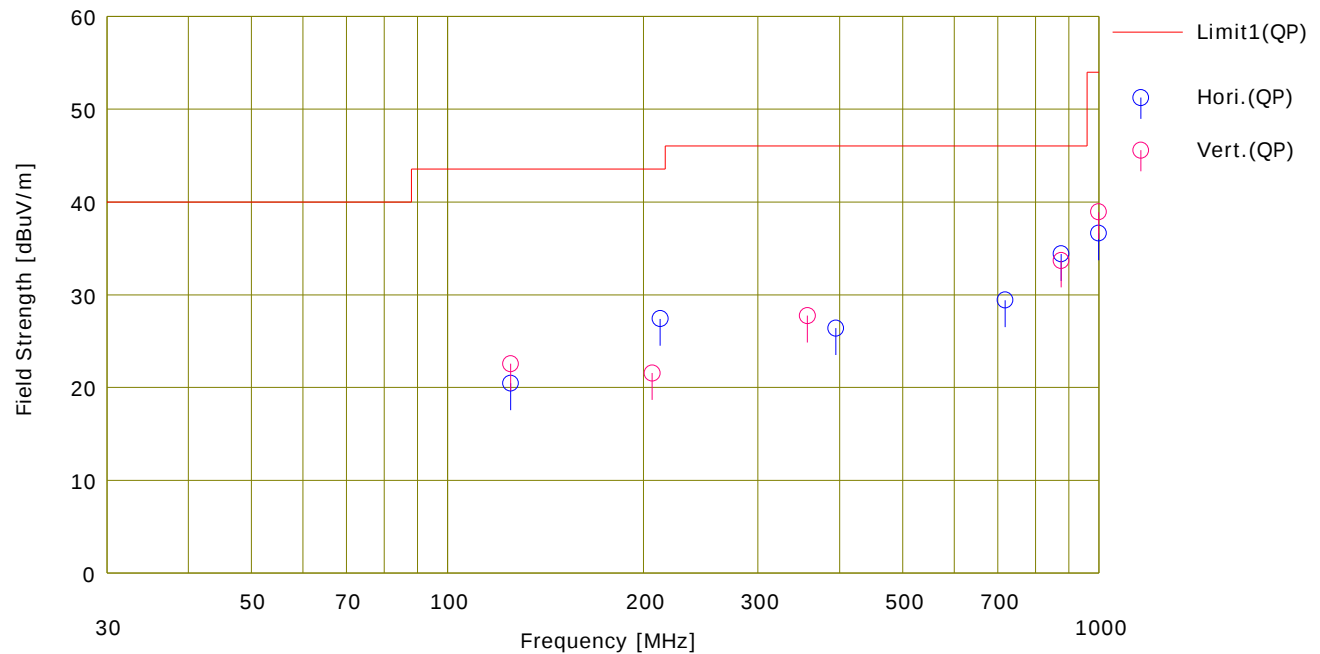
UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/21

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Other, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(97.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 48%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Tomoyuki Watanabe



No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
		[dBuV]				[dBuV/m]	[dBuV/m]	[dB]					
1	125.020	34.30	11.83	6.49	32.16	20.46	43.52	23.0	Hori.	335	178	HB	
2	212.200	42.50	9.94	7.05	32.08	27.41	43.52	16.1	Hori.	163	78	HB	
3	394.750	34.80	15.55	8.03	31.99	26.39	46.02	19.6	Hori.	100	186	HB	
4	718.100	31.20	21.00	9.25	32.03	29.42	46.02	16.6	Hori.	148	0	HB	
5	875.000	33.20	22.98	9.76	31.55	34.39	46.02	11.6	Hori.	105	146	HB	
6	999.999	32.90	24.09	10.14	30.50	36.63	53.97	17.3	Hori.	100	136	HB	
7	125.020	36.40	11.83	6.49	32.16	22.56	43.52	20.9	Vert.	100	265	HB	
8	206.300	36.70	9.92	7.02	32.08	21.56	43.52	21.9	Vert.	100	338	HB	
9	357.210	37.30	14.59	7.84	31.99	27.74	46.02	18.2	Vert.	100	210	HB	
10	875.000	32.50	22.98	9.76	31.55	33.69	46.02	12.3	Vert.	129	145	HB	
11	999.999	35.20	24.09	10.14	30.50	38.93	53.97	15.0	Vert.	106	198	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/21

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(87.75MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 48%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Tomoyuki Watanabe

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	87.362	24.00	8.08	6.20	32.19	6.09	40.00	33.9	Hori.	231	267	HB	
2	88.138	23.50	8.04	6.21	32.19	5.56	43.52	37.9	Hori.	224	262	HB	
3	174.724	27.40	12.43	6.82	32.12	14.53	43.52	28.9	Hori.	260	121	HB	
4	176.276	24.90	12.22	6.84	32.11	11.85	43.52	31.6	Hori.	158	256	HB	
5	264.414	29.70	12.35	7.34	32.04	17.35	46.02	28.6	Hori.	134	133	HB	
6	705.104	24.70	20.90	9.21	32.04	22.77	46.02	23.2	Hori.	158	0	HB	
7	873.620	24.00	22.97	9.75	31.56	25.16	46.02	20.8	Hori.	100	318	HB	
8	87.362	23.10	8.08	6.20	32.19	5.19	40.00	34.8	Vert.	100	146	HB	
9	88.138	23.00	8.04	6.21	32.19	5.06	43.52	38.4	Vert.	100	150	HB	
10	174.724	26.30	12.43	6.82	32.12	13.43	43.52	30.0	Vert.	100	175	HB	
11	176.276	23.70	12.22	6.84	32.11	10.65	43.52	32.8	Vert.	100	171	HB	
12	264.414	27.80	12.35	7.34	32.04	15.45	46.02	30.5	Vert.	100	127	HB	
13	705.104	24.20	20.90	9.21	32.04	22.27	46.02	23.7	Vert.	100	60	HB	
14	873.620	23.70	22.97	9.75	31.56	24.86	46.02	21.1	Vert.	100	84	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/21

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(97.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 48%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Tomoyuki Watanabe

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	97.512	26.00	8.60	6.28	32.18	8.70	43.52	34.8	Hori.	274	272	HB	
2	98.288	23.70	8.64	6.29	32.18	6.45	43.52	37.0	Hori.	280	296	HB	
3	195.024	27.50	10.20	6.95	32.09	12.56	43.52	30.9	Hori.	188	306	HB	
4	196.576	26.40	10.11	6.96	32.09	11.38	43.52	32.1	Hori.	199	306	HB	
5	390.048	25.40	15.47	8.01	31.99	16.89	46.02	29.1	Hori.	100	0	HB	
6	688.016	23.60	20.68	9.15	32.05	21.38	46.02	24.6	Hori.	153	232	HB	
7	877.608	23.40	23.02	9.76	31.54	24.64	46.02	21.3	Hori.	100	166	HB	
8	97.512	27.40	8.60	6.28	32.18	10.10	43.52	33.4	Vert.	100	139	HB	
9	98.288	25.70	8.64	6.29	32.18	8.45	43.52	35.0	Vert.	100	262	HB	
10	195.024	26.10	10.20	6.95	32.09	11.16	43.52	32.3	Vert.	100	231	HB	
11	196.576	24.80	10.11	6.96	32.09	9.78	43.52	33.7	Vert.	100	175	HB	
12	390.048	23.40	15.47	8.01	31.99	14.89	46.02	31.1	Vert.	100	328	HB	
13	688.016	24.40	20.68	9.15	32.05	22.18	46.02	23.8	Vert.	100	51	HB	
14	877.608	23.10	23.02	9.76	31.54	24.34	46.02	21.6	Vert.	100	0	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/21

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg

Mode : FM Receiving(107.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 48%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Tested by : Tomoyuki Watanabe

<< QP DATA >>

No.	Freq.	Reading	Ant.Fac	Loss	Gain	Result	Limit	Margin	Pola.	Height	Angle	Ant. Type	Comment
		<QP>				<QP>	<QP>	<QP>					
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	107.512	23.10	10.08	6.36	32.17	7.37	43.52	36.1	Hori.	250	259	HB	
2	108.288	23.00	10.14	6.36	32.17	7.33	43.52	36.1	Hori.	284	96	HB	
3	215.024	38.00	9.97	7.07	32.08	22.96	43.52	20.5	Hori.	160	83	HB	
4	216.576	29.90	9.97	7.08	32.08	14.87	46.02	31.1	Hori.	160	94	HB	
5	324.864	24.90	14.16	7.66	32.01	14.71	46.02	31.3	Hori.	100	0	HB	
6	752.584	23.10	22.08	9.36	31.99	22.55	46.02	23.4	Hori.	136	0	HB	
7	860.096	22.90	22.91	9.71	31.63	23.89	46.02	22.1	Hori.	100	166	HB	
8	107.512	24.50	10.08	6.36	32.17	8.77	43.52	34.7	Vert.	100	112	HB	
9	108.288	23.20	10.14	6.36	32.17	7.53	43.52	35.9	Vert.	100	292	HB	
10	215.024	30.80	9.97	7.07	32.08	15.76	43.52	27.7	Vert.	100	141	HB	
11	216.576	25.30	9.97	7.08	32.08	10.27	46.02	35.7	Vert.	100	326	HB	
12	324.864	23.20	14.16	7.66	32.01	13.01	46.02	33.0	Vert.	181	184	HB	
13	752.584	23.00	22.08	9.36	31.99	22.45	46.02	23.5	Vert.	100	98	HB	
14	860.096	23.20	22.91	9.71	31.63	24.19	46.02	21.8	Vert.	100	0	HB	

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

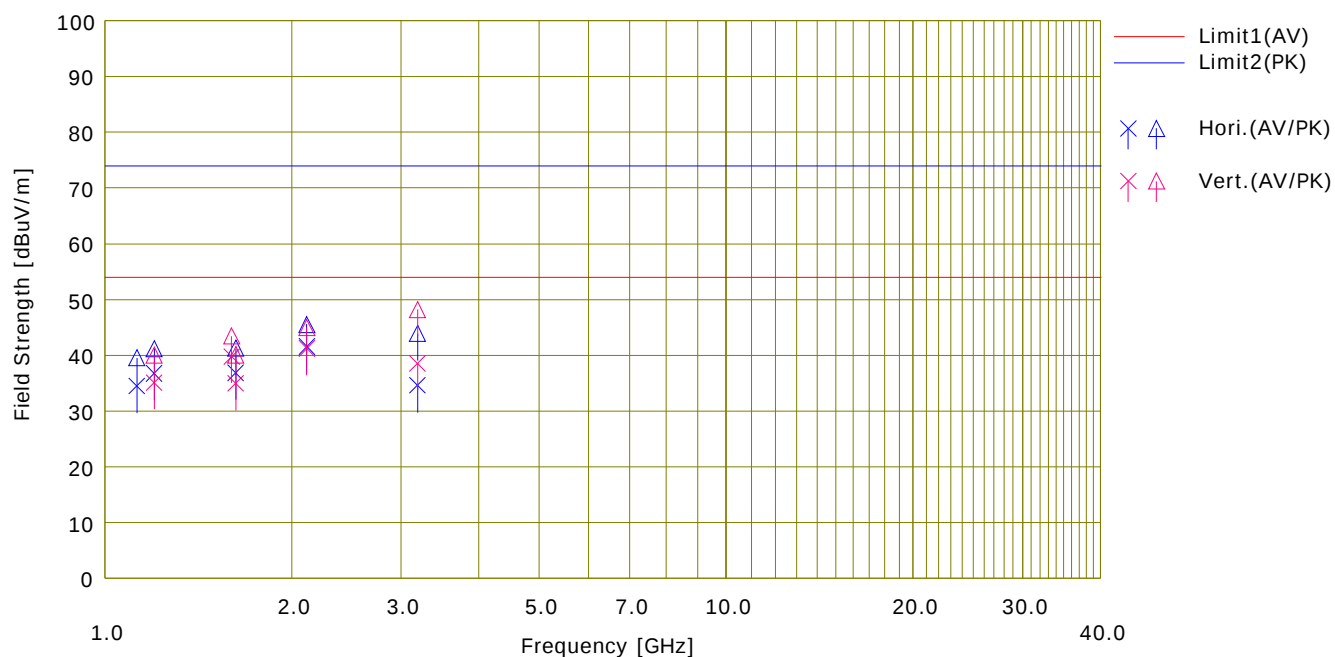
Date :2020/08/24

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Other, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=330 cm

Mode : FM Receiving(97.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 56%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Hiromitsu Tanabe



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> [dBuV]	<PK> [dBuV]					<AV> [dBuV/m]	<PK> [dBuV/m]	<AV> [dBuV/m]	<PK> [dBuV/m]	<AV> [dB]	<PK> [dB]					
1	1125.000	50.83	55.90	24.05	2.23	43.45	0.83	34.49	39.56	53.97	73.97	19.4	34.4	Hori.	110	304	Horn	
2	1200.000	52.58	57.03	24.42	2.30	43.39	0.83	36.74	41.19	53.97	73.97	17.2	32.7	Hori.	100	122	Horn	
3	1625.000	51.93	56.35	25.31	2.69	43.90	0.83	36.86	41.28	53.97	73.97	17.1	32.6	Hori.	100	189	Horn	
4	2111.622	52.60	56.60	28.92	3.08	43.87	0.83	41.56	45.56	53.97	73.97	12.4	28.4	Hori.	285	161	Horn	
5	3187.195	44.20	53.50	29.63	3.82	43.87	0.83	34.61	43.91	53.97	73.97	19.3	30.0	Hori.	100	160	Horn	
6	1200.000	50.95	55.85	24.42	2.30	43.39	0.83	35.11	40.01	53.97	73.97	18.8	33.9	Vert.	100	83	Horn	
7	1600.000	54.83	58.45	25.39	2.67	43.90	0.83	39.82	43.44	53.97	73.97	14.1	30.5	Vert.	166	0	Horn	
8	1625.000	50.00	55.16	25.31	2.69	43.90	0.83	34.93	40.09	53.97	73.97	19.0	33.8	Vert.	100	217	Horn	
9	2111.857	52.27	56.04	28.92	3.08	43.87	0.83	41.23	45.00	53.97	73.97	12.7	28.9	Vert.	144	202	Horn	
10	3187.195	48.16	57.80	29.63	3.82	43.87	0.83	38.57	48.21	53.97	73.97	15.4	25.7	Vert.	100	185	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/24

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=330 cm
Mode : FM Receiving(87.75MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 56%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Hiromitsu Tanabe

<< 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]		[cm]	[deg]		
1	1850.898	37.88	49.70	26.01	2.87	43.82	0.83	23.77	35.59	53.97	73.97	30.2	38.3	Hori.	167	276	Horn	
2	2115.312	39.54	50.46	28.89	3.08	43.87	0.83	28.47	39.39	53.97	73.97	25.5	34.5	Hori.	100	167	Horn	
3	3172.968	37.93	49.66	29.58	3.81	43.86	0.83	28.29	40.02	53.97	73.97	25.6	33.9	Hori.	157	184	Horn	
4	3437.382	38.10	50.00	30.12	3.98	44.00	0.83	29.03	40.93	53.97	73.97	24.9	33.0	Hori.	159	182	Horn	
5	3525.520	59.60	61.30	30.35	4.03	44.03	0.83	50.78	52.48	53.97	73.97	3.1	21.4	Hori.	100	181	Horn	
6	4406.900	39.17	51.41	32.07	4.53	44.78	0.83	31.82	44.06	53.97	73.97	22.1	29.9	Hori.	151	0	Horn	
7	5200.142	40.10	52.50	32.70	4.95	45.41	0.83	33.17	45.57	53.97	73.97	20.8	28.4	Hori.	100	0	Horn	
8	1850.898	38.00	49.89	26.01	2.87	43.82	0.83	23.89	35.78	53.97	73.97	30.0	38.1	Vert.	106	166	Horn	
9	2115.312	38.86	50.15	28.89	3.08	43.87	0.83	27.79	39.08	53.97	73.97	26.1	34.8	Vert.	123	197	Horn	
10	3172.968	38.01	50.01	29.58	3.81	43.86	0.83	28.37	40.37	53.97	73.97	25.6	33.6	Vert.	174	324	Horn	
11	3437.382	38.10	50.07	30.12	3.98	44.00	0.83	29.03	41.00	53.97	73.97	24.9	32.9	Vert.	175	260	Horn	
12	3525.520	53.80	57.60	30.35	4.03	44.03	0.83	44.98	48.78	53.97	73.97	8.9	25.1	Vert.	268	244	Horn	
13	4406.900	39.25	51.49	32.07	4.53	44.78	0.83	31.90	44.14	53.97	73.97	22.0	29.8	Vert.	155	54	Horn	
14	5200.142	40.17	52.17	32.70	4.95	45.41	0.83	33.24	45.24	53.97	73.97	20.7	28.7	Vert.	155	323	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/24

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=330 cm

Mode : FM Receiving(97.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 56%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Hiromitsu Tanabe

<< 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	1950.240	38.90	50.37	27.81	2.95	43.78	0.83	26.71	38.18	53.97	73.97	27.2	35.7	Hori.	120	235	Horn	
2	2340.288	37.98	49.91	27.51	3.24	43.86	0.83	25.70	37.63	53.97	73.97	28.2	36.3	Hori.	135	19	Horn	
3	3120.384	38.19	50.73	29.46	3.77	43.83	0.83	28.42	40.96	53.97	73.97	25.5	33.0	Hori.	100	58	Horn	
4	3510.432	58.65	60.40	30.30	4.02	44.02	0.83	49.78	51.53	53.97	73.97	4.1	22.4	Hori.	100	180	Horn	
5	3802.968	39.69	52.18	31.59	4.19	44.24	0.83	32.06	44.55	53.97	73.97	21.9	29.4	Hori.	100	10	Horn	
6	4875.600	39.70	51.31	32.57	4.78	45.21	0.83	32.67	44.28	53.97	73.97	21.3	29.6	Hori.	162	80	Horn	
7	5753.208	39.86	51.52	33.77	5.23	45.44	0.83	34.25	45.91	53.97	73.97	19.7	28.0	Hori.	100	181	Horn	
8	1950.240	40.20	50.74	27.81	2.95	43.78	0.83	28.01	38.55	53.97	73.97	25.9	35.4	Vert.	143	219	Horn	
9	2340.288	38.03	50.05	27.51	3.24	43.86	0.83	25.75	37.77	53.97	73.97	28.2	36.2	Vert.	135	0	Horn	
10	3120.384	38.16	50.52	29.46	3.77	43.83	0.83	28.39	40.75	53.97	73.97	25.5	33.2	Vert.	116	136	Horn	
11	3510.432	52.98	56.51	30.30	4.02	44.02	0.83	44.11	47.64	53.97	73.97	9.8	26.3	Vert.	278	248	Horn	
12	3802.968	39.60	52.70	31.59	4.19	44.24	0.83	31.97	45.07	53.97	73.97	22.0	28.9	Vert.	127	54	Horn	
13	4875.600	39.68	51.25	32.57	4.78	45.21	0.83	32.65	44.22	53.97	73.97	21.3	29.7	Vert.	100	124	Horn	
14	5753.208	39.83	51.68	33.77	5.23	45.44	0.83	34.22	46.07	53.97	73.97	19.7	27.9	Vert.	100	337	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/24

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=330 cm
Mode : FM Receiving(107.9MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 56%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Hiromitsu Tanabe

<< AV/PK DATA >>

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	1732.608	38.00	50.88	25.41	2.78	43.86	0.83	23.16	36.04	53.97	73.97	30.8	37.9	Hori.	100	22	Horn	
2	2165.760	38.30	50.06	28.42	3.12	43.89	0.83	26.78	38.54	53.97	73.97	27.1	35.4	Hori.	102	206	Horn	
3	3465.216	58.27	60.47	30.16	4.00	44.00	0.83	49.26	51.46	53.97	73.97	4.7	22.5	Hori.	100	181	Horn	
4	3898.368	38.95	51.00	31.91	4.25	44.35	0.83	31.59	43.64	53.97	73.97	22.3	30.3	Hori.	100	0	Horn	
5	4223.232	39.36	50.73	32.28	4.43	44.60	0.83	32.30	43.67	53.97	73.97	21.6	30.3	Hori.	130	184	Horn	
6	5414.400	39.40	51.85	33.12	5.07	45.45	0.83	32.97	45.42	53.97	73.97	21.0	28.5	Hori.	100	350	Horn	
7	5955.840	39.80	52.10	34.83	5.33	45.30	0.83	35.49	47.79	53.97	73.97	18.4	26.1	Hori.	100	347	Horn	
8	1732.608	38.20	50.18	25.41	2.78	43.86	0.83	23.36	35.34	53.97	73.97	30.6	38.6	Vert.	100	110	Horn	
9	2165.760	38.27	49.53	28.42	3.12	43.89	0.83	26.75	38.01	53.97	73.97	27.2	35.9	Vert.	125	225	Horn	
10	3465.216	54.05	57.30	30.16	4.00	44.00	0.83	45.04	48.29	53.97	73.97	8.9	25.6	Vert.	246	244	Horn	
11	3898.368	39.01	51.00	31.91	4.25	44.35	0.83	31.65	43.64	53.97	73.97	22.3	30.3	Vert.	200	36	Horn	
12	4223.232	36.36	51.04	32.28	4.43	44.60	0.83	29.30	43.98	53.97	73.97	24.6	29.9	Vert.	100	0	Horn	
13	5414.400	39.34	51.23	33.12	5.07	45.45	0.83	32.91	44.80	53.97	73.97	21.0	29.1	Vert.	143	91	Horn	
14	5955.840	39.85	51.56	34.83	5.33	45.30	0.83	35.54	47.25	53.97	73.97	18.4	26.7	Vert.	100	204	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

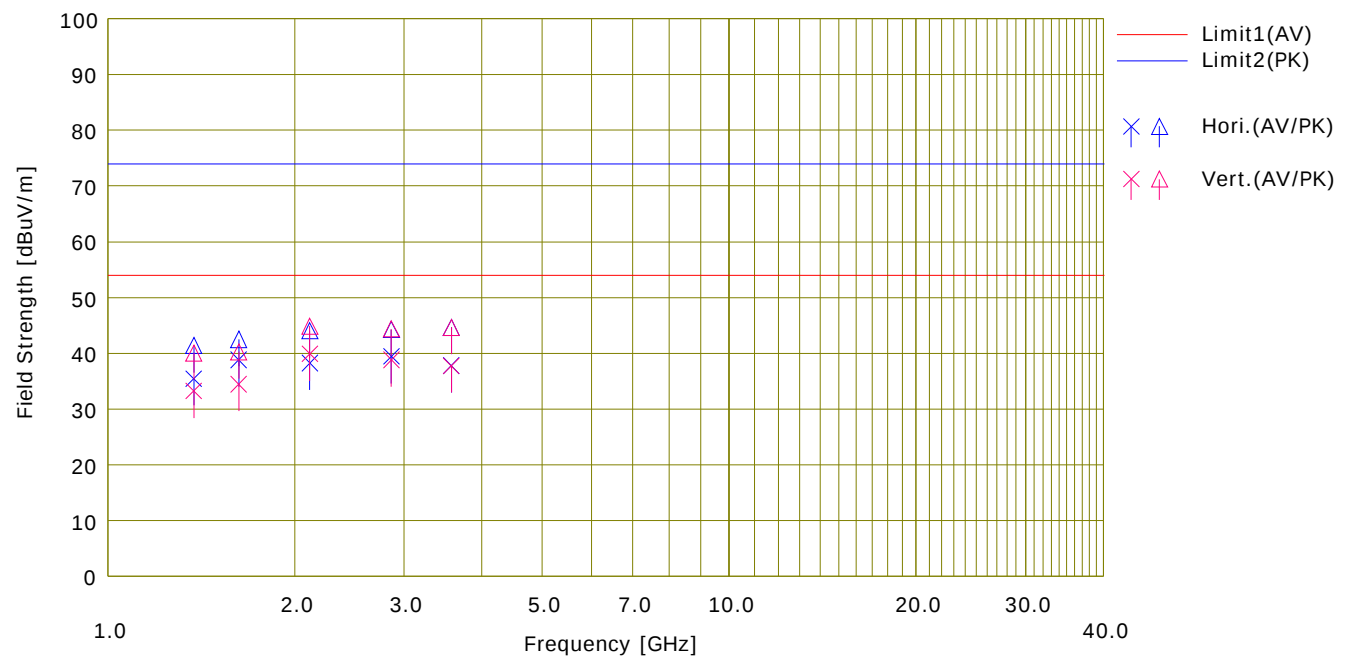
Date :2020/08/24

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Other, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=330 cm

Mode : FM Receiving(97.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 56%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Hiromitsu Tanabe



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> [dBuV]	<PK> [dBuV]					<AV> [dBuV/m]	<PK> [dBuV/m]	<AV> [dBuV/m]	<PK> [dBuV/m]	<AV> [dB]	<PK> [dB]					
1	1375.000	50.62	56.52	25.18	2.46	43.62	0.83	35.47	41.37	53.97	73.97	18.5	32.6	Hori.	133	164	Horn	
2	1625.000	53.87	57.54	25.31	2.69	43.90	0.83	38.80	42.47	53.97	73.97	15.1	31.5	Hori.	100	185	Horn	
3	2111.611	49.28	55.10	28.92	3.08	43.87	0.83	38.24	44.06	53.97	73.97	15.7	29.9	Hori.	130	175	Horn	
4	2857.681	50.00	54.87	28.74	3.60	43.76	0.83	39.41	44.28	53.97	73.97	14.5	29.6	Hori.	143	39	Horn	
5	3572.110	46.52	53.37	30.44	4.05	44.06	0.83	37.78	44.63	53.97	73.97	16.1	29.3	Hori.	162	53	Horn	
6	1375.000	48.36	55.20	25.18	2.46	43.62	0.83	33.21	40.05	53.97	73.97	20.7	33.9	Vert.	104	175	Horn	
7	1625.000	49.52	55.36	25.31	2.69	43.90	0.83	34.45	40.29	53.97	73.97	19.5	33.6	Vert.	106	214	Horn	
8	2111.118	50.94	55.89	28.92	3.08	43.87	0.83	39.90	44.85	53.97	73.97	14.0	29.1	Vert.	254	208	Horn	
9	2857.692	49.40	54.95	28.74	3.60	43.76	0.83	38.81	44.36	53.97	73.97	15.1	29.6	Vert.	140	32	Horn	
10	3572.416	46.50	53.36	30.44	4.05	44.06	0.83	37.76	44.62	53.97	73.97	16.2	29.3	Vert.	140	272	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/24

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=330 cm

Mode : FM Receiving(87.75MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 56%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Hiromitsu Tanabe

<< 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]		[cm]	[deg]		
1	1850.898	37.83	50.30	26.01	2.87	43.82	0.83	23.72	36.19	53.97	73.97	30.2	37.7	Hori.	125	349	Horn	
2	2115.312	40.10	51.36	28.89	3.08	43.87	0.83	29.03	40.29	53.97	73.97	24.9	33.6	Hori.	206	235	Horn	
3	3172.968	37.89	49.16	29.58	3.81	43.86	0.83	28.25	39.52	53.97	73.97	25.7	34.4	Hori.	100	0	Horn	
4	3437.382	37.91	49.80	30.12	3.98	44.00	0.83	28.84	40.73	53.97	73.97	25.1	33.2	Hori.	100	0	Horn	
5	3525.520	57.20	59.91	30.35	4.03	44.03	0.83	48.38	51.09	53.97	73.97	5.5	22.8	Hori.	145	237	Horn	
6	4406.900	39.05	50.25	32.07	4.53	44.78	0.83	31.70	42.90	53.97	73.97	22.2	31.0	Hori.	100	139	Horn	
7	5200.142	40.00	52.30	32.70	4.95	45.41	0.83	33.07	45.37	53.97	73.97	20.9	28.6	Hori.	100	194	Horn	
8	1850.898	37.83	49.78	26.01	2.87	43.82	0.83	23.72	35.67	53.97	73.97	30.2	38.3	Vert.	116	281	Horn	
9	2115.312	39.37	50.75	28.89	3.08	43.87	0.83	28.30	39.68	53.97	73.97	25.6	34.2	Vert.	158	145	Horn	
10	3172.968	37.94	49.59	29.58	3.81	43.86	0.83	28.30	39.95	53.97	73.97	25.6	34.0	Vert.	151	155	Horn	
11	3437.382	37.93	50.00	30.12	3.98	44.00	0.83	28.86	40.93	53.97	73.97	25.1	33.0	Vert.	100	233	Horn	
12	3525.520	56.14	58.81	30.35	4.03	44.03	0.83	47.32	49.99	53.97	73.97	6.6	23.9	Vert.	104	182	Horn	
13	4406.900	39.05	51.11	32.07	4.53	44.78	0.83	31.70	43.76	53.97	73.97	22.2	30.2	Vert.	100	0	Horn	
14	5200.142	39.94	51.89	32.70	4.95	45.41	0.83	33.01	44.96	53.97	73.97	20.9	29.0	Vert.	138	337	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber
Date :2020/08/24

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=330 cm
Mode : FM Receiving(97.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 56%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Hiromitsu Tanabe

<< 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	1950.240	39.10	50.60	27.81	2.95	43.78	0.83	26.91	38.41	53.97	73.97	27.0	35.5	Hori.	104	118	Horn	
2	2340.288	38.01	49.85	27.51	3.24	43.86	0.83	25.73	37.57	53.97	73.97	28.2	36.4	Hori.	100	156	Horn	
3	3120.384	38.10	49.71	29.46	3.77	43.83	0.83	28.33	39.94	53.97	73.97	25.6	34.0	Hori.	223	234	Horn	
4	3510.432	56.28	58.74	30.30	4.02	44.02	0.83	47.41	49.87	53.97	73.97	6.5	24.1	Hori.	106	184	Horn	
5	3802.968	39.70	51.56	31.59	4.19	44.24	0.83	32.07	43.93	53.97	73.97	21.9	30.0	Hori.	104	308	Horn	
6	4875.600	39.70	51.19	32.57	4.78	45.21	0.83	32.67	44.16	53.97	73.97	21.3	29.8	Hori.	100	0	Horn	
7	5753.208	40.00	52.51	33.77	5.23	45.44	0.83	34.39	46.90	53.97	73.97	19.5	27.0	Hori.	105	0	Horn	
8	1950.240	39.12	50.45	27.81	2.95	43.78	0.83	26.93	38.26	53.97	73.97	27.0	35.7	Vert.	126	187	Horn	
9	2340.288	37.90	49.81	27.51	3.24	43.86	0.83	25.62	37.53	53.97	73.97	28.3	36.4	Vert.	100	0	Horn	
10	3120.384	38.10	49.94	29.46	3.77	43.83	0.83	28.33	40.17	53.97	73.97	25.6	33.8	Vert.	100	0	Horn	
11	3510.432	52.70	56.22	30.30	4.02	44.02	0.83	43.83	47.35	53.97	73.97	10.1	26.6	Vert.	181	240	Horn	
12	3802.968	39.76	52.06	31.59	4.19	44.24	0.83	32.13	44.43	53.97	73.97	21.8	29.5	Vert.	169	0	Horn	
13	4875.600	39.73	51.95	32.57	4.78	45.21	0.83	32.70	44.92	53.97	73.97	21.2	29.0	Vert.	150	105	Horn	
14	5753.208	40.00	51.59	33.77	5.23	45.44	0.83	34.39	45.98	53.97	73.97	19.5	27.9	Vert.	132	58	Horn	

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

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Kashima EMC Lab. No.11 Semi-Anechoic Chamber

Date :2020/08/24

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Local, EUT Axis Hor: 0 deg, Ver: 0 deg, Test Distance=330 cm

Mode : FM Receiving(107.9MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 56%RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Hiromitsu Tanabe

<< AV/PK DATA >>

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	1732.608	38.32	50.57	25.41	2.78	43.86	0.83	23.48	35.73	53.97	73.97	30.4	38.2	Hori.	108	94	Horn	
2	2165.760	38.75	50.00	28.42	3.12	43.89	0.83	27.23	38.48	53.97	73.97	26.7	35.4	Hori.	100	208	Horn	
3	3465.216	56.10	58.78	30.16	4.00	44.00	0.83	47.09	49.77	53.97	73.97	6.8	24.2	Hori.	106	181	Horn	
4	3898.368	39.26	51.19	31.91	4.25	44.35	0.83	31.90	43.83	53.97	73.97	22.0	30.1	Hori.	115	315	Horn	
5	4223.232	41.40	52.31	32.28	4.43	44.60	0.83	34.34	45.25	53.97	73.97	19.6	28.7	Hori.	158	194	Horn	
6	5414.400	39.60	51.99	33.12	5.07	45.45	0.83	33.17	45.56	53.97	73.97	20.8	28.4	Hori.	100	0	Horn	
7	5955.840	40.15	52.50	34.83	5.33	45.30	0.83	35.84	48.19	53.97	73.97	18.1	25.7	Hori.	118	38	Horn	
8	1732.608	38.41	50.21	25.41	2.78	43.86	0.83	23.57	35.37	53.97	73.97	30.4	38.6	Vert.	147	254	Horn	
9	2165.760	38.12	50.60	28.42	3.12	43.89	0.83	26.60	39.08	53.97	73.97	27.3	34.8	Vert.	197	171	Horn	
10	3465.216	55.52	59.14	30.16	4.00	44.00	0.83	46.51	50.13	53.97	73.97	7.4	23.8	Vert.	198	160	Horn	
11	3898.368	39.20	51.32	31.91	4.25	44.35	0.83	31.84	43.96	53.97	73.97	22.1	30.0	Vert.	100	334	Horn	
12	4223.232	40.90	51.40	32.28	4.43	44.60	0.83	33.84	44.34	53.97	73.97	20.1	29.6	Vert.	100	211	Horn	
13	5414.400	39.58	51.40	33.12	5.07	45.45	0.83	33.15	44.97	53.97	73.97	20.8	29.0	Vert.	114	82	Horn	
14	5955.840	40.16	52.57	34.83	5.33	45.30	0.83	35.85	48.26	53.97	73.97	18.1	25.7	Vert.	111	316	Horn	

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

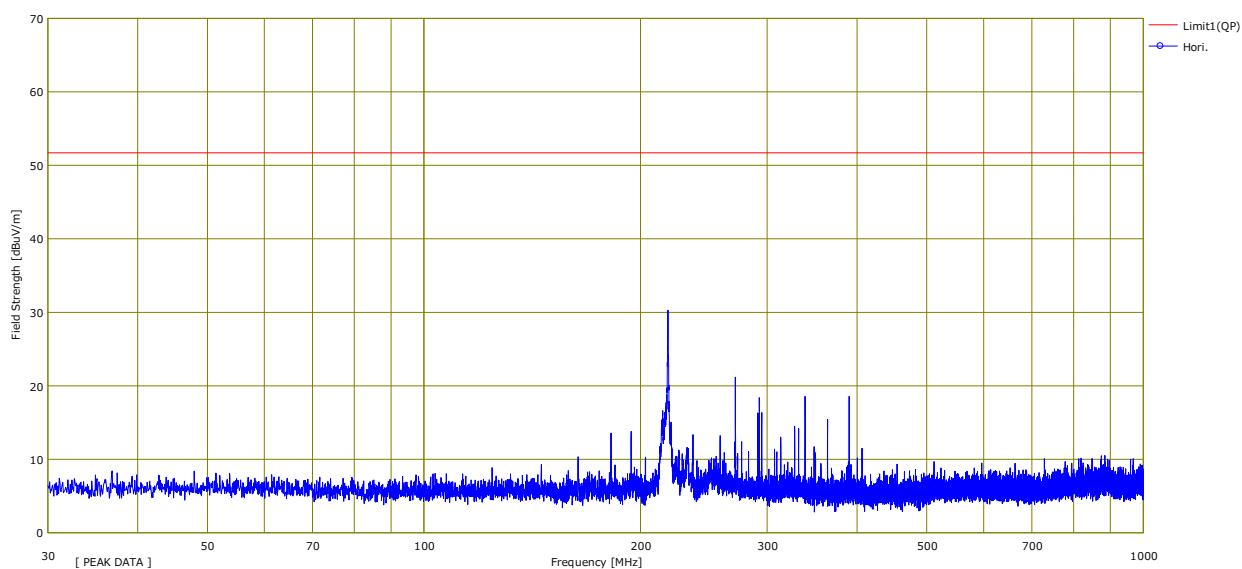
Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
Other	181.998	-	29.3	-17.63	-	11.67	51.7	40.0
	218.397	-	45.0	-17.37	-	27.63	51.7	24.0
	270.948	-	36.3	-17.13	-	19.17	51.7	32.5
	292.533	-	34.5	-17.14	-	17.36	51.7	34.3
	294.909	-	32.0	-17.13	-	14.87	51.7	36.8
	338.684	-	33.8	-17.35	-	16.45	51.7	35.2
	363.997	-	31.2	-17.53	-	13.67	51.7	38.0
	390.044	-	35.4	-17.75	-	17.65	51.7	34.0

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(87.75 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
87.75 MHz	88.138	-	23.7	-18.24	-	5.46	51.7	46.2
	176.276	-	21.3	-17.66	-	3.64	51.7	48.0
	264.414	-	33.2	-17.16	-	16.04	51.7	35.6
	352.552	-	39.3	-17.43	-	21.87	51.7	29.8
	440.690	-	22.2	-18.12	-	4.08	51.7	47.6
	528.828	-	21.0	-18.42	-	2.58	51.7	49.1
	616.966	-	21.2	-18.46	-	2.74	51.7	48.9
	705.104	-	21.0	-18.33	-	2.67	51.7	49.0
	793.242	-	20.9	-18.09	-	2.81	51.7	48.8
	881.380	-	21.0	-17.82	-	3.18	51.7	48.5
	969.518	-	20.4	-17.48	-	2.92	51.7	48.7
	87.362	-	19.9	-18.24	-	1.66	51.7	50.0
	174.724	-	20.0	-17.69	-	2.31	51.7	49.3
	262.086	-	20.6	-17.18	-	3.42	51.7	48.2
	349.448	-	19.7	-17.41	-	2.29	51.7	49.4
	436.810	-	21.1	-18.09	-	3.01	51.7	48.6
	524.172	-	20.7	-18.43	-	2.27	51.7	49.4
	611.534	-	20.8	-18.47	-	2.33	51.7	49.3
	698.896	-	20.7	-18.34	-	2.36	51.7	49.3
	786.258	-	21.1	-18.12	-	2.98	51.7	48.7
	873.620	-	22.3	-17.85	-	4.45	51.7	47.2
	960.982	-	20.5	-17.53	-	2.97	51.7	48.7

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
97.9 MHz	98.288	-	20.0	-18.17	-	1.83	51.7	49.8
	196.576	-	21.3	-17.52	-	3.78	51.7	47.9
	294.864	-	29.1	-17.13	-	11.97	51.7	39.7
	393.152	-	20.4	-17.77	-	2.63	51.7	49.0
	491.440	-	20.6	-18.35	-	2.25	51.7	49.4
	589.728	-	20.9	-18.47	-	2.43	51.7	49.2
	688.016	-	20.9	-18.35	-	2.55	51.7	49.1
	786.304	-	21.0	-18.12	-	2.88	51.7	48.8
	884.592	-	23.4	-17.81	-	5.59	51.7	46.1
	982.880	-	20.6	-17.43	-	3.17	51.7	48.5
	97.512	-	23.6	-18.17	-	5.43	51.7	46.2
	195.024	-	20.8	-17.53	-	3.27	51.7	48.4
	292.536	-	34.5	-17.14	-	17.36	51.7	34.3
	390.048	-	35.4	-17.75	-	17.65	51.7	34.0
	487.560	-	21.3	-18.33	-	2.97	51.7	48.7
	585.072	-	21.1	-18.48	-	2.62	51.7	49.0
	682.584	-	20.8	-18.37	-	2.43	51.7	49.2
	780.096	-	21.5	-18.13	-	3.37	51.7	48.3
	877.608	-	21.5	-17.83	-	3.67	51.7	48.0
	975.120	-	20.5	-17.46	-	3.04	51.7	48.6

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(107.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
107.9 MHz	108.288	-	23.1	-18.12	-	4.98	51.7	46.7
	216.576	-	29.0	-17.38	-	11.62	51.7	40.0
	324.864	-	33.3	-17.27	-	16.03	51.7	35.6
	433.152	-	28.9	-18.07	-	10.83	51.7	40.8
	541.440	-	21.1	-18.45	-	2.65	51.7	49.0
	649.728	-	21.3	-18.42	-	2.88	51.7	48.8
	758.016	-	20.8	-18.19	-	2.61	51.7	49.0
	866.304	-	21.2	-17.87	-	3.33	51.7	48.3
	974.592	-	20.7	-17.46	-	3.24	51.7	48.4
	107.512	-	19.9	-18.12	-	1.78	51.7	49.9
	215.024	-	31.5	-17.39	-	14.11	51.7	37.5
	322.536	-	20.8	-17.26	-	3.54	51.7	48.1
	430.048	-	21.7	-18.04	-	3.66	51.7	48.0
	537.560	-	20.8	-18.44	-	2.36	51.7	49.3
	645.072	-	20.8	-18.42	-	2.38	51.7	49.3
	752.584	-	20.7	-18.20	-	2.50	51.7	49.2
	860.096	-	21.7	-17.90	-	3.80	51.7	47.9
	967.608	-	20.6	-17.49	-	3.11	51.7	48.5

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

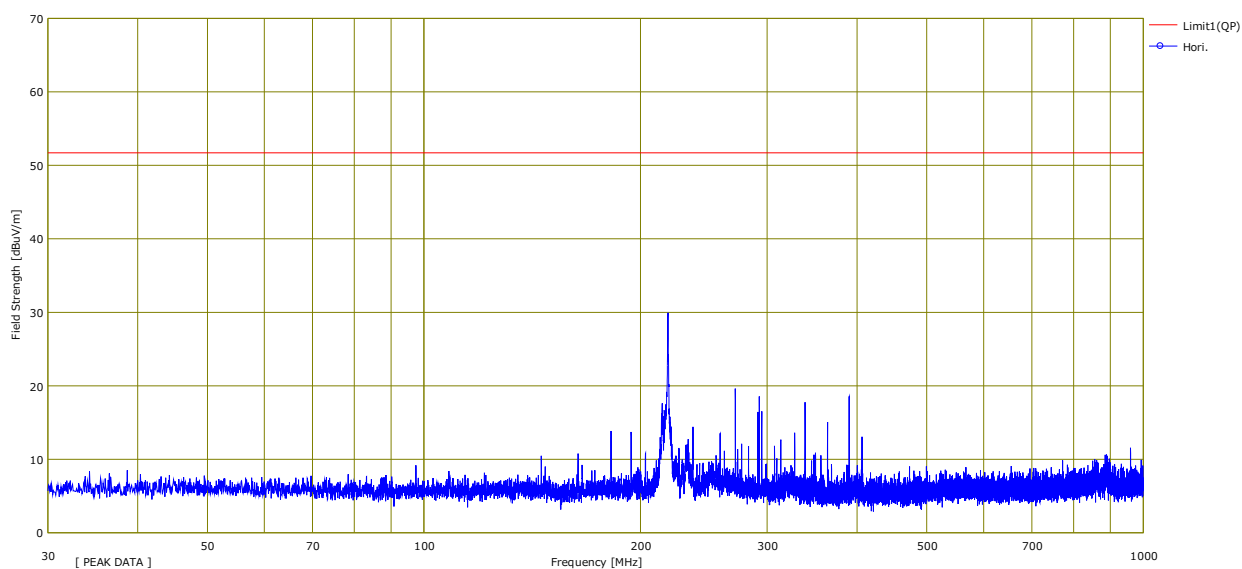
Date :2020/08/28

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 48%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/28

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 48%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
Other	181.999	-	29.7	-17.63	-	12.07	51.7	39.6
	218.398	-	45.0	-17.37	-	27.63	51.7	24.0
	270.936	-	36.2	-17.13	-	19.07	51.7	32.6
	292.533	-	34.5	-17.14	-	17.36	51.7	34.3
	294.908	-	32.0	-17.13	-	14.87	51.7	36.8
	338.688	-	34.0	-17.35	-	16.65	51.7	35.0
	363.997	-	31.2	-17.53	-	13.67	51.7	38.0
	390.043	-	35.5	-17.75	-	17.75	51.7	33.9

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/28

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(87.75 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 48%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
87.75 MHz	88.138	-	23.9	-18.24	-	5.66	51.7	46.0
	176.276	-	21.5	-17.66	-	3.84	51.7	47.8
	264.414	-	33.2	-17.16	-	16.04	51.7	35.6
	352.552	-	39.5	-17.43	-	22.07	51.7	29.6
	440.690	-	22.2	-18.12	-	4.08	51.7	47.6
	528.828	-	21.1	-18.42	-	2.68	51.7	49.0
	616.966	-	21.4	-18.46	-	2.94	51.7	48.7
	705.104	-	21.1	-18.33	-	2.77	51.7	48.9
	793.242	-	21.4	-18.09	-	3.31	51.7	48.3
	881.380	-	21.0	-17.82	-	3.18	51.7	48.5
	969.518	-	20.6	-17.48	-	3.12	51.7	48.5
	87.362	-	20.1	-18.24	-	1.86	51.7	49.8
	174.724	-	20.2	-17.69	-	2.51	51.7	49.1
	262.086	-	20.8	-17.18	-	3.62	51.7	48.0
	349.448	-	19.9	-17.41	-	2.49	51.7	49.2
	436.810	-	21.3	-18.09	-	3.21	51.7	48.4
	524.172	-	20.9	-18.43	-	2.47	51.7	49.2
	611.534	-	21.1	-18.47	-	2.63	51.7	49.0
	698.896	-	21.0	-18.34	-	2.66	51.7	49.0
	786.258	-	21.2	-18.12	-	3.08	51.7	48.6
	873.620	-	23.9	-17.85	-	6.05	51.7	45.6
	960.982	-	20.5	-17.53	-	2.97	51.7	48.7

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/28

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 48%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
97.9 MHz	98.288	-	20.2	-18.17	-	2.03	51.7	49.6
	196.576	-	21.6	-17.52	-	4.08	51.7	47.6
	294.864	-	29.0	-17.13	-	11.87	51.7	39.8
	393.152	-	20.5	-17.77	-	2.73	51.7	48.9
	491.440	-	20.7	-18.35	-	2.35	51.7	49.3
	589.728	-	20.9	-18.47	-	2.43	51.7	49.2
	688.016	-	20.9	-18.35	-	2.55	51.7	49.1
	786.304	-	21.1	-18.12	-	2.98	51.7	48.7
	884.592	-	21.2	-17.81	-	3.39	51.7	48.3
	982.880	-	20.6	-17.43	-	3.17	51.7	48.5
	97.512	-	23.7	-18.17	-	5.53	51.7	46.1
	195.024	-	21.0	-17.53	-	3.47	51.7	48.2
	292.536	-	34.5	-17.14	-	17.36	51.7	34.3
	390.048	-	35.5	-17.75	-	17.75	51.7	33.9
	487.560	-	21.6	-18.33	-	3.27	51.7	48.4
	585.072	-	21.3	-18.48	-	2.82	51.7	48.8
	682.584	-	20.9	-18.37	-	2.53	51.7	49.1
	780.096	-	21.5	-18.13	-	3.37	51.7	48.3
	877.608	-	21.4	-17.83	-	3.57	51.7	48.1
	975.120	-	20.4	-17.46	-	2.94	51.7	48.7

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/28

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(107.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 24deg.C. / 48%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
107.9 MHz	108.288	-	23.2	-18.12	-	5.08	51.7	46.6
	216.576	-	29.1	-17.38	-	11.72	51.7	39.9
	324.864	-	33.4	-17.27	-	16.13	51.7	35.5
	433.152	-	29.2	-18.07	-	11.13	51.7	40.5
	541.440	-	21.3	-18.45	-	2.85	51.7	48.8
	649.728	-	21.6	-18.42	-	3.18	51.7	48.5
	758.016	-	20.9	-18.19	-	2.71	51.7	48.9
	866.304	-	21.2	-17.87	-	3.33	51.7	48.3
	974.592	-	20.5	-17.46	-	3.04	51.7	48.6
	107.512	-	19.9	-18.12	-	1.78	51.7	49.9
	215.024	-	31.6	-17.39	-	14.21	51.7	37.4
	322.536	-	21.0	-17.26	-	3.74	51.7	47.9
	430.048	-	22.0	-18.04	-	3.96	51.7	47.7
	537.560	-	20.9	-18.44	-	2.46	51.7	49.2
	645.072	-	21.1	-18.42	-	2.68	51.7	49.0
	752.584	-	21.0	-18.20	-	2.80	51.7	48.9
	860.096	-	21.2	-17.90	-	3.30	51.7	48.4
	967.608	-	20.5	-17.49	-	3.01	51.7	48.6

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

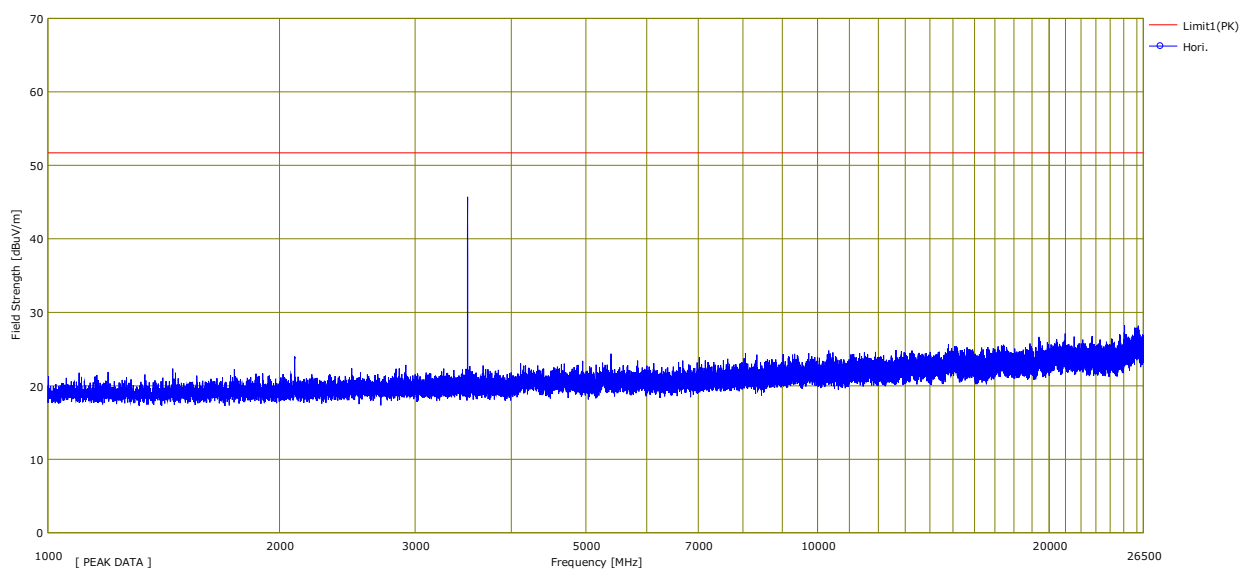
Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

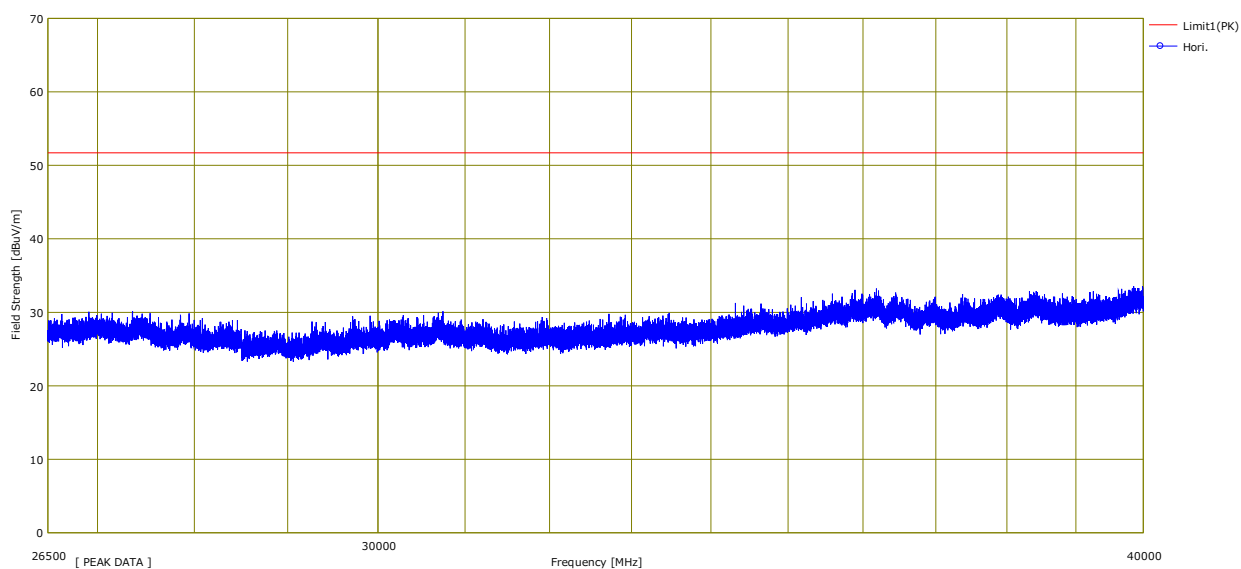
Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
Other	1747.183	49.8	-	-30.41	19.38	-	51.7	32.3
	2092.290	55.5	-	-30.26	25.26	-	51.7	26.4
	2984.774	50.8	-	-29.82	20.93	-	51.7	30.7
	3494.382	52.0	-	-29.86	22.18	-	51.7	29.5
	4780.773	52.1	-	-30.58	21.52	-	51.7	30.1
	5057.799	53.0	-	-30.67	22.35	-	51.7	29.3
	6988.745	50.9	-	-29.19	21.67	-	51.7	30.0
	8249.918	48.8	-	-26.86	21.93	-	51.7	29.7
	10461.360	50.5	-	-26.20	24.28	-	51.7	27.4
	11155.130	50.4	-	-26.55	23.81	-	51.7	27.8
	12748.750	50.2	-	-27.73	22.48	-	51.7	29.2

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(87.75 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
87.75 MHz	1410.208	51.4	-	-30.42	20.95	-	51.7	30.7
	1762.760	51.1	-	-30.39	20.67	-	51.7	31.0
	2115.312	51.1	-	-30.26	20.84	-	51.7	30.8
	3172.968	50.8	-	-29.84	20.96	-	51.7	30.7
	3525.520	74.5	-	-29.86	44.67	-	51.7	7.0
	6698.488	51.1	-	-29.58	21.54	-	51.7	30.1
	7051.040	52.9	-	-29.11	23.75	-	51.7	27.9
	10576.560	49.7	-	-26.07	23.66	-	51.7	28.0

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
97.9 MHz	1560.192	50.9	-	-30.53	20.32	-	51.7	31.3
	1950.240	50.9	-	-30.25	20.65	-	51.7	31.0
	2340.288	50.3	-	-30.15	20.16	-	51.7	31.5
	3120.384	50.3	-	-29.83	20.44	-	51.7	31.2
	3510.432	75.2	-	-29.87	45.29	-	51.7	6.4
	6630.816	51.4	-	-29.70	21.74	-	51.7	29.9
	7020.864	53.4	-	-29.15	24.22	-	51.7	27.4
	10531.300	49.0	-	-26.11	22.86	-	51.7	28.8

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(107.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
107.9 MHz	1299.456	50.2	-	-30.27	19.96	-	51.7	31.7
	1732.608	51.2	-	-30.42	20.8	-	51.7	30.9
	3032.064	51.4	-	-29.82	21.53	-	51.7	30.1
	3465.216	77.0	-	-29.87	47.08	-	51.7	4.6
	6497.280	51.8	-	-29.94	21.89	-	51.7	29.8
	6930.432	55.3	-	-29.27	26.07	-	51.7	25.6
	7363.584	50.8	-	-28.44	22.37	-	51.7	29.3
	10395.650	49.0	-	-26.27	22.72	-	51.7	28.9

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

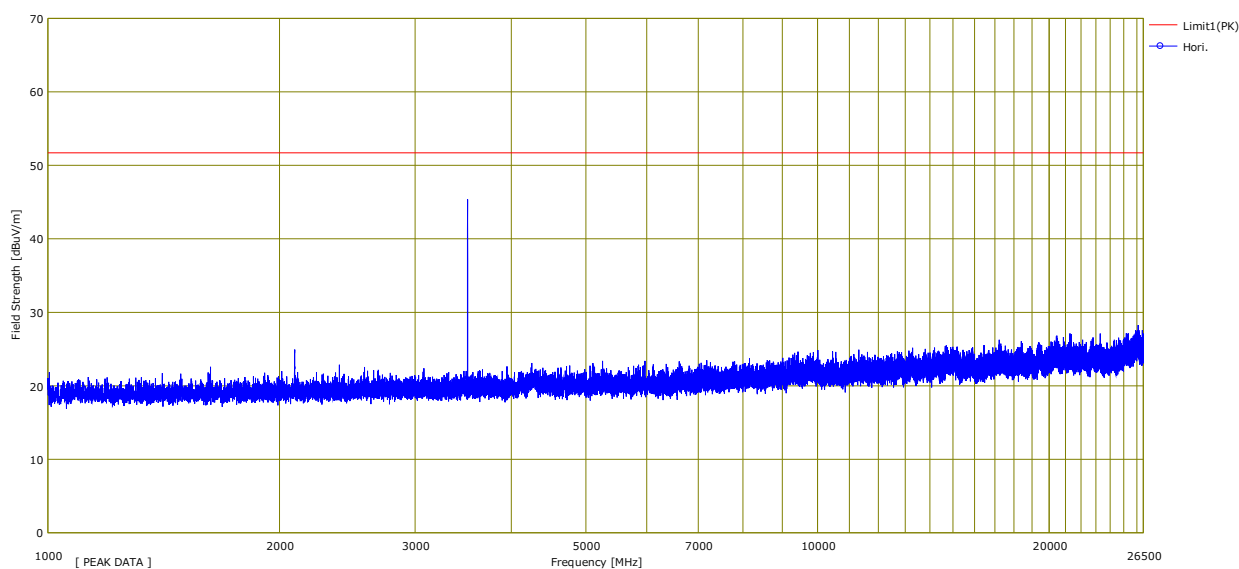
Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

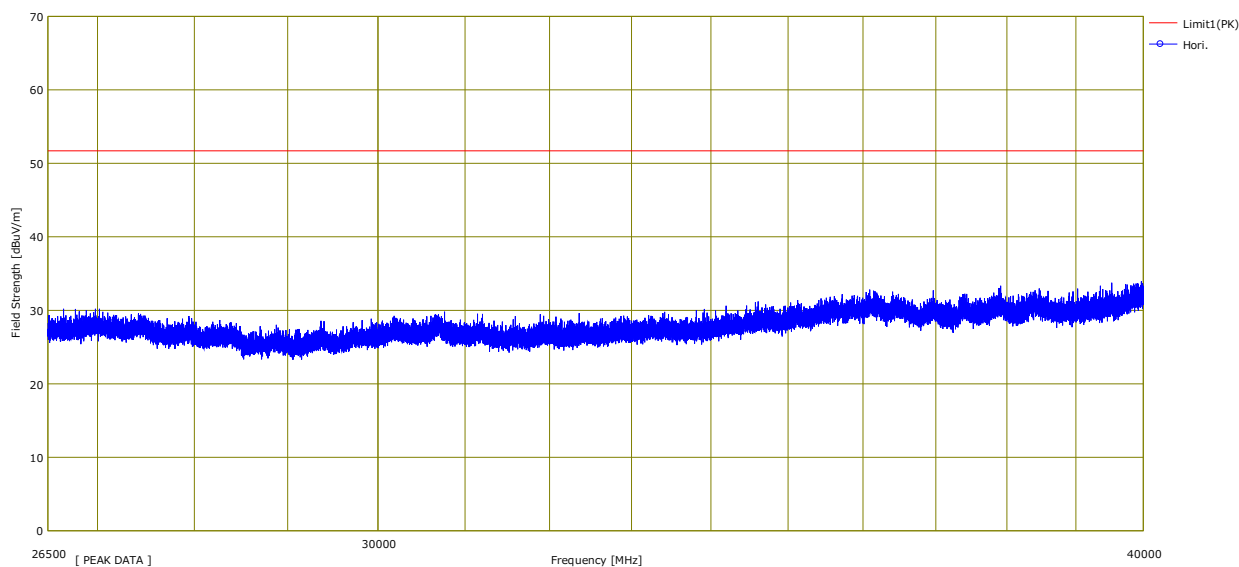
Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
Other	1747.183	53.1	-	-30.41	22.64	-	51.7	29.0
	2092.144	55.4	-	-30.26	25.09	-	51.7	26.6
	2984.772	50.2	-	-29.82	20.39	-	51.7	31.3
	3494.367	52.1	-	-29.86	22.25	-	51.7	29.4
	4780.770	51.9	-	-30.58	21.32	-	51.7	30.3
	5057.799	53.1	-	-30.67	22.40	-	51.7	29.3
	6988.735	51.6	-	-29.19	22.36	-	51.7	29.3
	8368.574	48.5	-	-26.70	21.76	-	51.7	29.9
	10460.710	50.1	-	-26.20	23.88	-	51.7	27.8
	11155.130	49.8	-	-26.55	23.23	-	51.7	28.4
	12748.720	50.1	-	-27.73	22.38	-	51.7	29.3

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(87.75 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
87.75 MHz	1410.208	51.3	-	-30.42	20.86	-	51.7	30.8
	1762.760	50.6	-	-30.39	20.2	-	51.7	31.5
	2115.312	50.3	-	-30.26	20.07	-	51.7	31.6
	3172.968	50.0	-	-29.84	20.13	-	51.7	31.5
	3525.520	74.9	-	-29.86	45.06	-	51.7	6.6
	6698.488	51.0	-	-29.58	21.39	-	51.7	30.3
	7051.040	52.7	-	-29.11	23.57	-	51.7	28.1
	10576.560	49.1	-	-26.07	23.04	-	51.7	28.6

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
97.9 MHz	1560.192	51.1	-	-30.53	20.56	-	51.7	31.1
	1950.240	50.1	-	-30.25	19.8	-	51.7	31.9
	2340.288	50.3	-	-30.15	20.11	-	51.7	31.5
	3120.384	50.8	-	-29.83	20.92	-	51.7	30.7
	3510.432	75.3	-	-29.87	45.47	-	51.7	6.2
	6630.816	51.3	-	-29.70	21.61	-	51.7	30.0
	7020.864	53.2	-	-29.15	24.03	-	51.7	27.6
	10531.300	49.4	-	-26.11	23.26	-	51.7	28.4

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Hi type
Serial No. : 500025
Remarks : Main port, Local

Mode : FM Receiving(107.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
107.9 MHz	1299.456	50.8	-	-30.27	20.49	-	51.7	31.2
	1732.608	50.4	-	-30.42	19.95	-	51.7	31.7
	3032.064	50.6	-	-29.82	20.82	-	51.7	30.8
	3465.216	76.9	-	-29.87	47.00	-	51.7	4.7
	6497.280	52.6	-	-29.94	22.63	-	51.7	29.0
	6930.432	55.3	-	-29.27	26.00	-	51.7	25.7
	7363.584	50.5	-	-28.44	22.03	-	51.7	29.6
	10395.650	49.1	-	-26.27	22.83	-	51.7	28.8

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

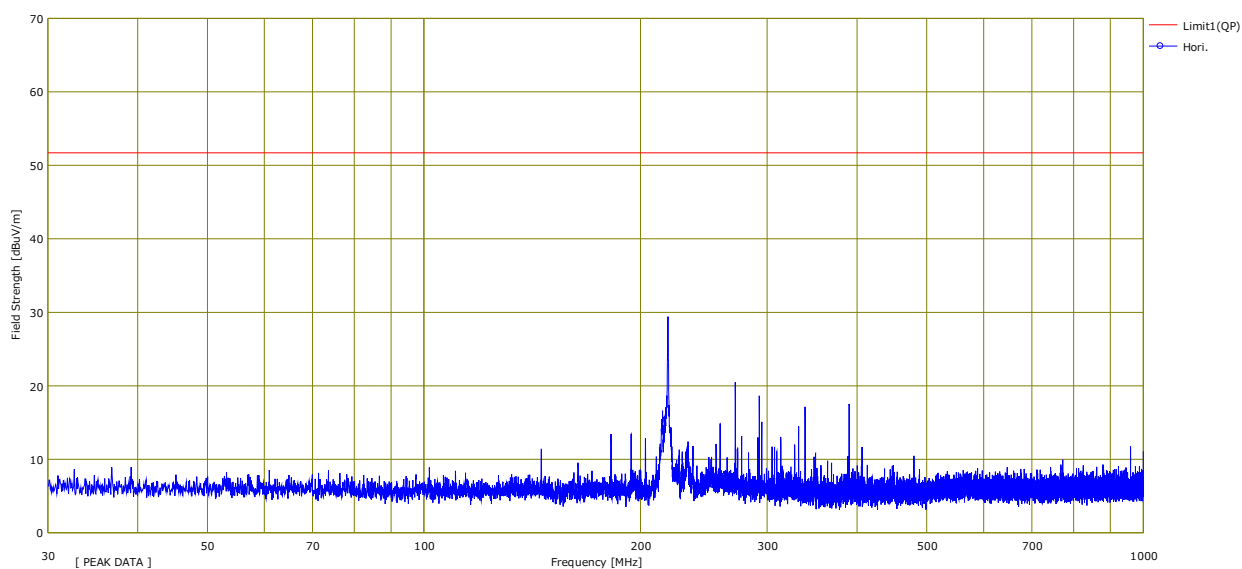
Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
Other	181.996	-	29.8	-17.63	-	12.17	51.7	39.5
	218.397	-	45.2	-17.37	-	27.83	51.7	23.8
	270.947	-	36.4	-17.13	-	19.27	51.7	32.4
	292.532	-	34.3	-17.14	-	17.16	51.7	34.5
	294.909	-	30.4	-17.13	-	13.27	51.7	38.4
	338.683	-	33.5	-17.35	-	16.15	51.7	35.5
	390.040	-	34.2	-17.75	-	16.45	51.7	35.2
	406.422	-	28.6	-17.88	-	10.72	51.7	40.9

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Local

Mode : FM Receiving(87.75 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
87.75 MHz	88.138	-	22.6	-18.24	-	4.36	51.7	47.3
	176.276	-	20.9	-17.66	-	3.24	51.7	48.4
	264.414	-	33.1	-17.16	-	15.94	51.7	35.7
	352.552	-	38.1	-17.43	-	20.67	51.7	31.0
	440.690	-	21.7	-18.12	-	3.58	51.7	48.1
	528.828	-	20.9	-18.42	-	2.48	51.7	49.2
	616.966	-	21.2	-18.46	-	2.74	51.7	48.9
	705.104	-	21.1	-18.33	-	2.77	51.7	48.9
	793.242	-	20.8	-18.09	-	2.71	51.7	48.9
	881.380	-	20.6	-17.82	-	2.78	51.7	48.9
	969.518	-	20.4	-17.48	-	2.92	51.7	48.7
	87.362	-	20.1	-18.24	-	1.86	51.7	49.8
	174.724	-	20.1	-17.69	-	2.41	51.7	49.2
	262.086	-	20.5	-17.18	-	3.32	51.7	48.3
	349.448	-	19.9	-17.41	-	2.49	51.7	49.2
	436.810	-	23.2	-18.09	-	5.11	51.7	46.5
	524.172	-	20.9	-18.43	-	2.47	51.7	49.2
	611.534	-	21.1	-18.47	-	2.63	51.7	49.0
	698.896	-	21.0	-18.34	-	2.66	51.7	49.0
	786.258	-	20.8	-18.12	-	2.68	51.7	49.0
	873.620	-	20.7	-17.85	-	2.85	51.7	48.8
	960.982	-	20.4	-17.53	-	2.87	51.7	48.8

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Local

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
97.9 MHz	98.288	-	20.1	-18.17	-	1.93	51.7	49.7
	196.576	-	21.5	-17.52	-	3.98	51.7	47.7
	294.864	-	27.2	-17.13	-	10.07	51.7	41.6
	393.152	-	20.4	-17.77	-	2.63	51.7	49.0
	491.440	-	20.7	-18.35	-	2.35	51.7	49.3
	589.728	-	20.9	-18.47	-	2.43	51.7	49.2
	688.016	-	20.9	-18.35	-	2.55	51.7	49.1
	786.304	-	20.7	-18.12	-	2.58	51.7	49.1
	884.592	-	20.7	-17.81	-	2.89	51.7	48.8
	982.880	-	20.4	-17.43	-	2.97	51.7	48.7
	97.512	-	22.7	-18.17	-	4.53	51.7	47.1
	195.024	-	20.7	-17.53	-	3.17	51.7	48.5
	292.536	-	34.3	-17.14	-	17.16	51.7	34.5
	390.048	-	34.2	-17.75	-	16.45	51.7	35.2
	487.560	-	21.3	-18.33	-	2.97	51.7	48.7
	585.072	-	21.1	-18.48	-	2.62	51.7	49.0
	682.584	-	21.0	-18.37	-	2.63	51.7	49.0
	780.096	-	21.0	-18.13	-	2.87	51.7	48.8
	877.608	-	20.6	-17.83	-	2.77	51.7	48.9
	975.120	-	20.4	-17.46	-	2.94	51.7	48.7

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Local

Mode : FM Receiving(107.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
107.9 MHz	108.288	-	22.3	-18.12	-	4.18	51.7	47.5
	216.576	-	29.4	-17.38	-	12.02	51.7	39.6
	324.864	-	33.2	-17.27	-	15.93	51.7	35.7
	433.152	-	27.9	-18.07	-	9.83	51.7	41.8
	541.440	-	21.2	-18.45	-	2.75	51.7	48.9
	649.728	-	21.6	-18.42	-	3.18	51.7	48.5
	758.016	-	20.9	-18.19	-	2.71	51.7	48.9
	866.304	-	20.8	-17.87	-	2.93	51.7	48.7
	974.592	-	20.4	-17.46	-	2.94	51.7	48.7
	107.512	-	20.1	-18.12	-	1.98	51.7	49.7
	215.024	-	31.2	-17.39	-	13.81	51.7	37.8
	322.536	-	20.8	-17.26	-	3.54	51.7	48.1
	430.048	-	22.0	-18.04	-	3.96	51.7	47.7
	537.560	-	22.0	-18.44	-	3.56	51.7	48.1
	645.072	-	21.0	-18.42	-	2.58	51.7	49.1
	752.584	-	20.9	-18.20	-	2.70	51.7	49.0
	860.096	-	20.7	-17.90	-	2.80	51.7	48.9
	967.608	-	20.3	-17.49	-	2.81	51.7	48.8

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

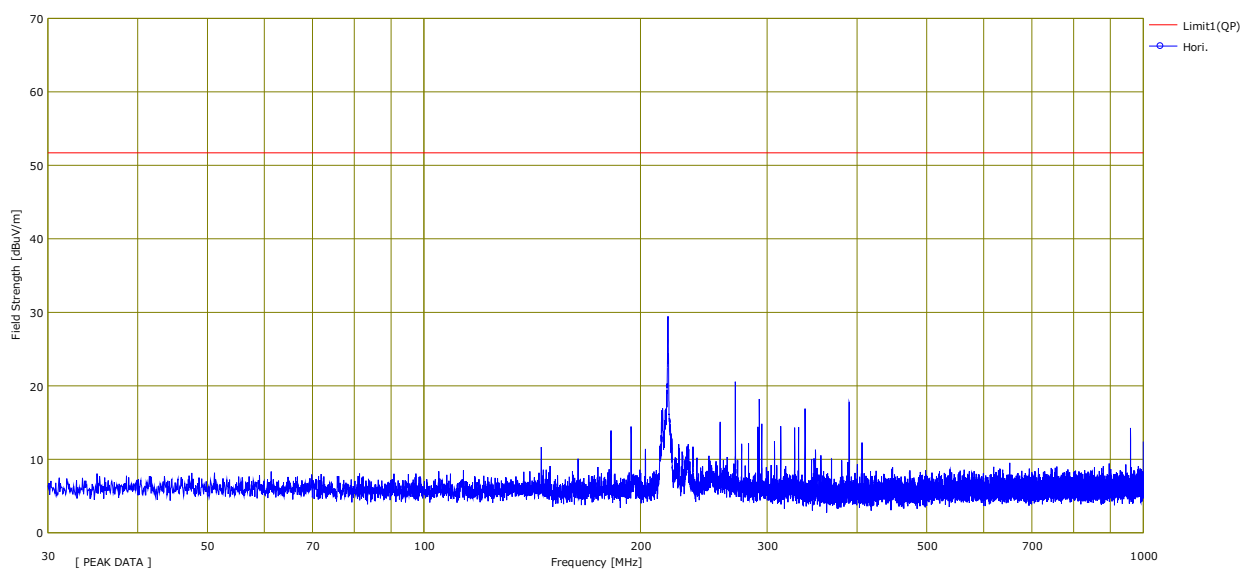
Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
Other	182.000	-	29.9	-17.63	-	12.27	51.7	39.4
	218.396	-	45.0	-17.37	-	27.63	51.7	24.0
	270.946	-	36.4	-17.13	-	19.27	51.7	32.4
	292.533	-	34.3	-17.14	-	17.16	51.7	34.5
	294.911	-	30.4	-17.13	-	13.27	51.7	38.4
	338.685	-	33.4	-17.35	-	16.05	51.7	35.6
	390.042	-	34.3	-17.75	-	16.55	51.7	35.1
	406.427	-	28.6	-17.88	-	10.72	51.7	40.9

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Local

Mode : FM Receiving(87.75 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
87.75 MHz	88.138	-	22.5	-18.24	-	4.26	51.7	47.4
	176.276	-	20.8	-17.66	-	3.14	51.7	48.5
	264.414	-	33.1	-17.16	-	15.94	51.7	35.7
	352.552	-	38.1	-17.43	-	20.67	51.7	31.0
	440.690	-	21.7	-18.12	-	3.58	51.7	48.1
	528.828	-	20.9	-18.42	-	2.48	51.7	49.2
	616.966	-	21.3	-18.46	-	2.84	51.7	48.8
	705.104	-	21.1	-18.33	-	2.77	51.7	48.9
	793.242	-	20.8	-18.09	-	2.71	51.7	48.9
	881.380	-	20.6	-17.82	-	2.78	51.7	48.9
	969.518	-	20.4	-17.48	-	2.92	51.7	48.7
	87.362	-	20.1	-18.24	-	1.86	51.7	49.8
	174.724	-	20.1	-17.69	-	2.41	51.7	49.2
	262.086	-	20.6	-17.18	-	3.42	51.7	48.2
	349.448	-	19.9	-17.41	-	2.49	51.7	49.2
	436.810	-	23.3	-18.09	-	5.21	51.7	46.4
	524.172	-	20.9	-18.43	-	2.47	51.7	49.2
	611.534	-	21.0	-18.47	-	2.53	51.7	49.1
	698.896	-	20.9	-18.34	-	2.56	51.7	49.1
	786.258	-	20.8	-18.12	-	2.68	51.7	49.0
	873.620	-	20.6	-17.85	-	2.75	51.7	48.9
	960.982	-	20.4	-17.53	-	2.87	51.7	48.8

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Local

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
97.9 MHz	98.288	-	20.0	-18.17	-	1.83	51.7	49.8
	196.576	-	21.4	-17.52	-	3.88	51.7	47.8
	294.864	-	27.2	-17.13	-	10.07	51.7	41.6
	393.152	-	20.2	-17.77	-	2.43	51.7	49.2
	491.440	-	20.6	-18.35	-	2.25	51.7	49.4
	589.728	-	20.9	-18.47	-	2.43	51.7	49.2
	688.016	-	20.6	-18.35	-	2.25	51.7	49.4
	786.304	-	20.4	-18.12	-	2.28	51.7	49.4
	884.592	-	20.4	-17.81	-	2.59	51.7	49.1
	982.880	-	20.3	-17.43	-	2.87	51.7	48.8
	97.512	-	22.6	-18.17	-	4.43	51.7	47.2
	195.024	-	20.6	-17.53	-	3.07	51.7	48.6
	292.536	-	34.3	-17.14	-	17.16	51.7	34.5
	390.048	-	34.2	-17.75	-	16.45	51.7	35.2
	487.560	-	21.1	-18.33	-	2.77	51.7	48.9
	585.072	-	21.1	-18.48	-	2.62	51.7	49.0
	682.584	-	20.8	-18.37	-	2.43	51.7	49.2
	780.096	-	20.8	-18.13	-	2.67	51.7	49.0
	877.608	-	20.2	-17.83	-	2.37	51.7	49.3
	975.120	-	20.2	-17.46	-	2.74	51.7	48.9

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Local

Mode : FM Receiving(107.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
107.9 MHz	108.288	-	22.2	-18.12	-	4.08	51.7	47.6
	216.576	-	29.4	-17.38	-	12.02	51.7	39.6
	324.864	-	33.2	-17.27	-	15.93	51.7	35.7
	433.152	-	28.0	-18.07	-	9.93	51.7	41.7
	541.440	-	21.2	-18.45	-	2.75	51.7	48.9
	649.728	-	21.6	-18.42	-	3.18	51.7	48.5
	758.016	-	20.8	-18.19	-	2.61	51.7	49.0
	866.304	-	20.7	-17.87	-	2.83	51.7	48.8
	974.592	-	20.5	-17.46	-	3.04	51.7	48.6
	107.512	-	19.9	-18.12	-	1.78	51.7	49.9
	215.024	-	31.2	-17.39	-	13.81	51.7	37.8
	322.536	-	20.6	-17.26	-	3.34	51.7	48.3
	430.048	-	21.7	-18.04	-	3.66	51.7	48.0
	537.560	-	20.7	-18.44	-	2.26	51.7	49.4
	645.072	-	20.7	-18.42	-	2.28	51.7	49.4
	752.584	-	20.6	-18.20	-	2.40	51.7	49.3
	860.096	-	20.4	-17.90	-	2.50	51.7	49.2
	967.608	-	20.0	-17.49	-	2.51	51.7	49.1

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

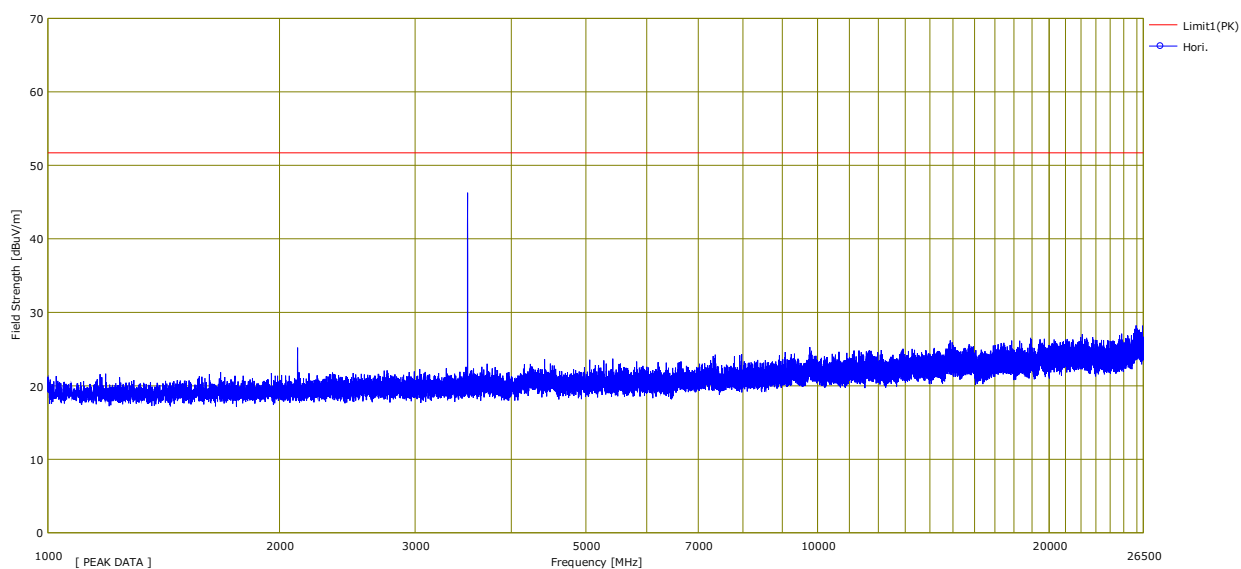
Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

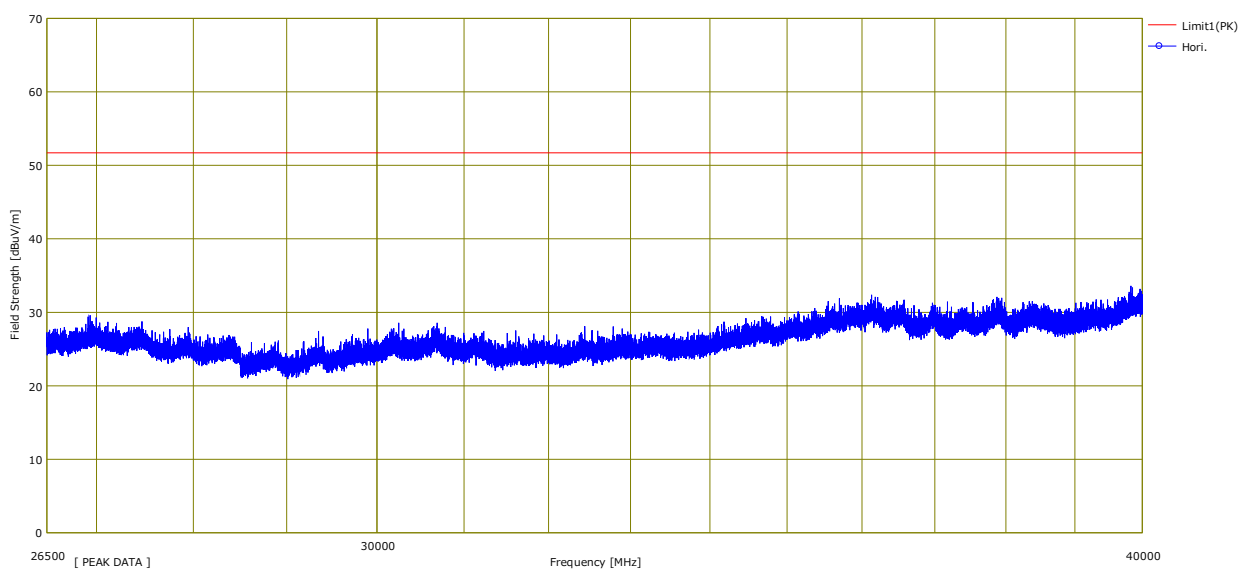
Date :2020/08/27

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Hiromitsu Tanabe



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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
Other	1875.000	50.9	-	-30.32	20.58	-	51.7	31.1
	2111.000	55.9	-	-30.27	25.63	-	51.7	26.0
	2875.000	50.4	-	-29.84	20.56	-	51.7	31.1
	3494.350	51.7	-	-29.86	21.84	-	51.7	29.8
	4780.770	52.5	-	-30.58	21.92	-	51.7	29.7
	5057.830	54.5	-	-30.67	23.83	-	51.7	27.8
	7967.950	52.0	-	-27.39	24.61	-	51.7	27.0
	9561.550	49.7	-	-26.13	23.57	-	51.7	28.1
	10555.000	50.0	-	-26.09	23.91	-	51.7	27.7
	14342.200	52.3	-	-28.00	24.30	-	51.7	27.4

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Local

Mode : FM Receiving(87.75 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
87.75 MHz	1410.208	51.2	-	-30.42	20.78	-	51.7	30.9
	1762.760	51.4	-	-30.39	21.01	-	51.7	30.6
	2115.312	51.9	-	-30.26	21.64	-	51.7	30.0
	2467.864	50.7	-	-30.06	20.64	-	51.7	31.0
	3172.968	51.0	-	-29.84	21.16	-	51.7	30.5
	3525.520	74.7	-	-29.86	44.84	-	51.7	6.8
	7051.040	53.4	-	-29.11	24.29	-	51.7	27.4

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Local

Mode : FM Receiving(97.9 MHz)_Analog
Order No. : 13408125M
Power : DC 13.2 V
Temp./Humi. : 23deg.C. / 54%RH

Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
97.9 MHz	1560.192	50.9	-	-30.53	20.37	-	51.7	31.3
	1755.216	51.0	-	-30.41	20.59	-	51.7	31.1
	1950.240	50.7	-	-30.25	20.45	-	51.7	31.2
	2340.288	50.4	-	-30.15	20.25	-	51.7	31.4
	3120.384	51.0	-	-29.83	21.17	-	51.7	30.5
	3510.432	75.2	-	-29.87	45.33	-	51.7	6.3
	7020.864	52.3	-	-29.15	23.15	-	51.7	28.5

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
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Remarks : Main port, Local

Mode : FM Receiving(107.9 MHz)_Analog
Order No. : 13408125M
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Limit : FCC15.111 Antenna terminal

Tested by : Kazuhiro Ando

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75Ω]		[dBuV/75Ω]	[dB]
107.9 MHz	1299.456	50.3	-	-30.27	20.03	-	51.7	31.6
	1732.608	51.5	-	-30.42	21.08	-	51.7	30.6
	2165.760	50.9	-	-30.26	20.64	-	51.7	31.0
	3032.064	50.8	-	-29.82	20.98	-	51.7	30.7
	3465.216	77.0	-	-29.87	47.13	-	51.7	4.5
	6930.432	54.2	-	-29.27	24.93	-	51.7	26.7

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

DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Kashima EMC Lab. No.2 Measurement Room

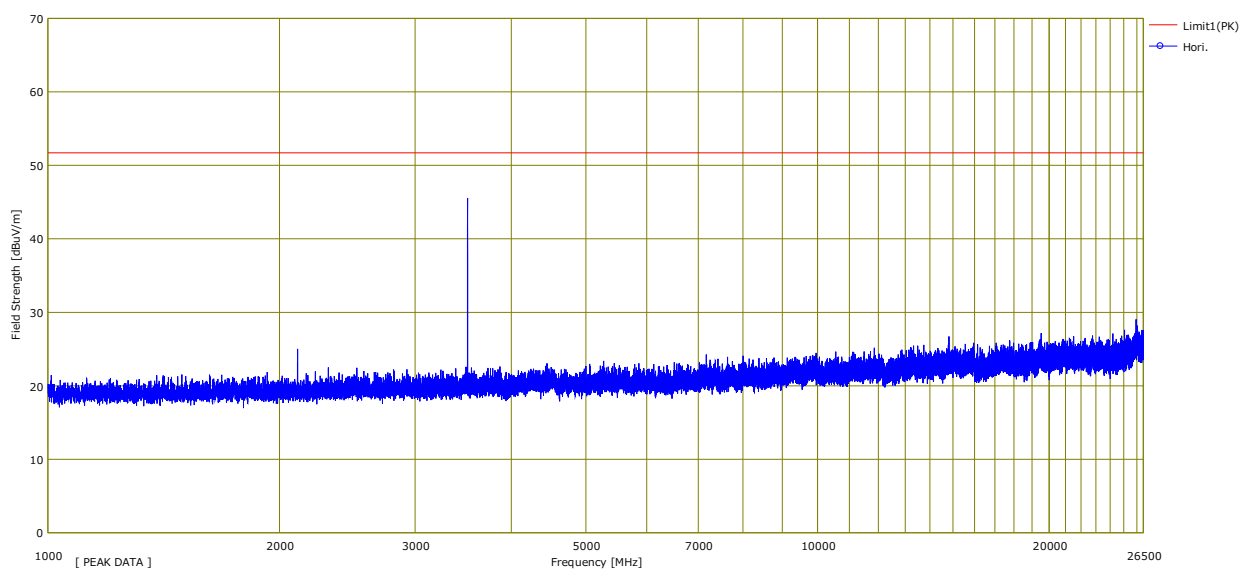
Date :2020/08/26

Company : Panasonic Corporation
Kind of EUT : Car Navigation
Model No. : AT2104, Lo type
Serial No. : 500109
Remarks : Main port, Other

Mode : FM Receiving(97.9 MHz)_Digital
Order No. : 13408125M
Power : DC 13.2 V
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Calculation:Result[dBuV]=Reading[dBuV]+Fac(Cable+ATT-Amp)[dB]