EMI TEST REPORT

Test Report No.: 13251737S-R2

Applicant	:	**Panasonic Corporation**
Type of EUT	:	**Car radio tuner**
Model Number of EUT	:	**CQ-TH1AN0AX**
FCC ID	:	**ACJ932CQTH1AN0AX**
Test regulation	:	**FCC Part 15 Subpart B: 2019**
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 limits of 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. Shonan 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. This report is a revised version of 13251737S-R1. 13251737S-R1 is replaced with this report.

Date of test: February 3 to 16, 2020

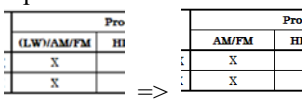
Representative test engineer:
Shunsaku Yumi
Engineer
Consumer Technology Division

Approved by:
Shinichi Takano
Engineer
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".

REVISION HISTORY

Original Test Report No.: 13251737S

Revision	Test report No.	Date	Page revised	Contents
- (Original)	13251737S	February 11, 2020	-	-
1	13251737S-R1	April 1, 2020	P.5	Modification of Frequency of operation from: 87.75 MHz to 107.9 MHz to: 87.75 MHz, 87.9 MHz to 107.9 MHz
2	13251737S-R2	April 7, 2020	P.5	Modification of rating from: DC 13.2 V to: DC 6 V, DC 9 V
			P.5	Update table of similar models 

Reference: Abbreviations (Including words undescribed in this report)

AAN	Asymmetric Artificial Network
AC	Alternating Current
AM	Amplitude Modulation
AMN	Artificial Mains Network
Amp, AMP	Amplifier
ANSI	American National Standards Institute
Ant, ANT	Antenna
AP	Access Point
ASK	Amplitude Shift Keying
Atten., ATT	Attenuator
AV	Average
BPSK	Binary Phase-Shift Keying
BR	Bluetooth Basic Rate
BT	Bluetooth
BT LE	Bluetooth Low Energy
BW	BandWidth
C.F	Correction Factor
Cal Int	Calibration Interval
CAV	CISPR AV
CCK	Complementary Code Keying
CDN	Coupling Decoupling Network
Ch., CH	Channel
CISPR	Comite International Special des Perturbations Radioelectriques
Corr.	Correction
CPE	Customer premise equipment
CW	Continuous Wave
DBPSK	Differential BPSK
DC	Direct Current
DET	Detector
Dmax	maximum absolute voltage change during an observation period
DQPSK	Differential QPSK
DSSS	Direct Sequence Spread Spectrum
EDR	Enhanced Data Rate
e.i.r.p., EIRP	Equivalent Isotropically Radiated Power
EM clamp	Electromagnetic clamp
EMC	ElectroMagnetic Compatibility
EMI	ElectroMagnetic Interference
EMS	ElectroMagnetic Susceptibility
EN	European Norm
e.r.p., ERP	Effective Radiated Power
EU	European Union
EUT	Equipment Under Test
Fac.	Factor
FCC	Federal Communications Commission
FHSS	Frequency Hopping Spread Spectrum
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
ILAC	International Laboratory Accreditation Conference
ISED	Innovation, Science and Economic Development Canada
ISN	Impedance Stabilization Network
ISO	International Organization for Standardization
JAB	Japan Accreditation Board
LAN	Local Area Network
LCL	Longitudinal Conversion Loss
LIMS	Laboratory Information Management System
LISN	Line Impedance Stabilization Network
MRA	Mutual Recognition Arrangement
NIST	National Institute of Standards and Technology
NS	No signal detect.
NSA	Normalized Site Attenuation
NVLAP	National Voluntary Laboratory Accreditation Program
OBW	Occupied Band Width
OFDM	Orthogonal Frequency Division Multiplexing
PK	Peak
P_{LT}	long-term flicker severity
POHC(A)	Partial Odd Harmonic Current
Pol., Pola.	Polarization
PR-ASK	Phase Reversal ASK
P_{ST}	short-term flicker severity
QAM	Quadrature Amplitude Modulation
QP	Quasi-Peak
QPSK	Quadri-Phase Shift Keying
r.m.s., RMS	Root Mean Square
RBW	Resolution Band Width
RE	Radio Equipment
REV	Reverse
RF	Radio Frequency
RFID	Radio Frequency Identifier
RSS	Radio Standards Specifications
Rx	Receiving
SINAD	Ratio of (Signal + Noise + Distortion) to (Noise + Distortion)
S/N	Signal to Noise ratio
SA, S/A	Spectrum Analyzer
SG	Signal Generator
SVSWR	Site-Voltage Standing Wave Ratio
THC(A)	Total Harmonic Current
THD(%)	Total Harmonic Distortion
TR	Test Receiver
Tx	Transmitting
VBW	Video BandWidth
Vert.	Vertical
WLAN	Wireless LAN
xDSL	Generic term for all types of DSL technology (DSL: Digital Subscriber Line)

UL Japan, Inc.
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN
Telephone: +81 463 50 6400
Facsimile: +81 463 50 6401

CONTENTS

		PAGE
SECTION 1 :	Customer information	5
SECTION 2 :	Equipment under test (E.U.T.)	5
SECTION 3 :	Test specification, procedures & results	6
SECTION 4 :	Operation of E.U.T. during testing	8
SECTION 5 :	Radiated emission	10
SECTION 6 :	Antenna power conduction for receivers	11
APPENDIX 1:	Data of EMI test	12
APPENDIX 2:	Test instruments	25
APPENDIX 3:	Photographs of test setup	26

SECTION 1: Customer information

Company Name	:	Panasonic Corporation
Address	:	4261 Ikonobe-cho, Tsuzuki-ku, Yokohama-city, 224-8520, Japan
Telephone Number	:	+81-50-3689-6676
Facsimile Number	:	+81-45-931-0806
Contact Person	:	Takanori Matsumoto

The information provided from the customer is as follows;
- Applicant, Type of Equipment, Model No. FCC ID on the cover and other relevant pages
- Operating/Test Mode(s) (Mode(s)) on all the relevant pages
- SECTION 1: Customer information
- SECTION 2: Equipment under test (E.U.T.)
- SECTION 4: Operation of E.U.T. during testing

* The laboratory is exempted from liability of any test results affected from the above information in SECTION 2 and 4.

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

2.1 Identification of E.U.T.

Type of Equipment	:	Car radio tuner
Model No.	:	CQ-TH1AN0AX
Serial No.	:	Refer to Clause 4.2
Rating	:	DC 6 V, DC 9 V
Country of Mass-production	:	Mexico
Condition of EUT	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	:	No modification by the test lab.
Receipt Date of Sample (Information from test lab.)	:	February 3, 2020

2.2 Product description

Model: CQ-TH1AN0AX (referred to as the EUT in this report) is a Car radio tuner.

Similar model:

Version	Model No.	Product Function				Radio Band	Mounting Bracket	Assembly Plant
		AM/FM	HD-Radio	DAB	FM-VICS			
Ver.1	CQ-TH1AN0AX	X	-	-	-	US	A	Mexico
	CQ-TH18N0FX	X	-	-	-	US	B	Mexico

Clock frequencies: 300 MHz

FM tuner specification
Frequency of operation: 87.75 MHz, 87.9 MHz to 107.9 MHz
Intermediate frequency: ±44.1 kHz

SECTION 3: Test specification, procedures & results

3.1 Test specification

Test specification : FCC Part 15 Subpart B: 2019
FCC Part 15 final revised on July 19, 2019 and effective August 19, 2019 except 15.258
Title : FCC 47CFR Part 15 Radio Frequency Device
Subpart B Unintentional Radiators

3.2 Procedures & Results

Item	Test Procedure	Limits	Deviation	Worst margin	Result
Conducted emission	ANSI C63.4: 2014 IEEE 187:2003	FCC 15.107 (a)	N/A *1)	N/A	N/A
Radiated emission	ANSI C63.4: 2014 IEEE 187:2003	FCC 15.109 (a)	N/A	7.9 dB Freq.: 221.172 MHz Detector: QP Polarization: Horizontal Mode: FM Receiving (97.9 MHz), analog Other	Complied a)
Antenna power conduction for receivers	ANSI C63.4: 2014 IEEE 187:2003	FCC 15.111 (a)	N/A	12.2 dB Freq.: 498.804 MHz Detector: QP Mode: FM Receiving (97.9 MHz), analog Other	Complied b)
Note: UL Japan's EMI Work Procedures No. 13-EM-W0420 a) Refer to Appendix 1 (data of Radiated emission) b) Refer to Appendix 1 (data of Antenna Terminal)					
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.					

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

3.3 Additions to standards

No addition, deviation or exclusion has been made from standards.

3.4 Confirmation

UL Japan, Inc. hereby confirms that E.U.T., in the configuration tested, complies with the specifications FCC Part 15 Subpart B: 2019

3.5 Uncertainty

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

Item	Frequency range	No.1 SAC[*1]/SR[*2] (±)	No.2 SAC/SR (±)	No.3 SAC/SR (±)
Radiated emission (Measurement distance: 3 m)	30 MHz-200 MHz	4.6 dB	4.6 dB	4.6 dB
	200 MHz-1 GHz	6.0 dB	6.0 dB	6.0 dB
	1 GHz-6 GHz	4.9 dB	4.9 dB	4.9 dB
Antenna Terminal Voltage[*3]	5 MHz-1000 MHz	2.8 dB		
	1000 MHz-	2.4 dB		

*1: SAC=Semi-Anechoic Chamber
*2: SR= Shielded Room is applied besides radiated emission
*3: Value of Antenna Terminal Voltage measurement is also applies to the No.5 and No.6 Shielded Room.

3.6 Test location

UL Japan, Inc. Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN
Telephone number : +81 463 50 6400
Facsimile number : +81 463 50 6401
JAB Accreditation No. : RTL02610
FCC Test Firm Registration Number: 839876
ISED Lab Company Number: 2973D

	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Semi-anechoic chamber	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.2 Semi-anechoic chamber	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.3 Semi-anechoic chamber	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
No.4 Semi-anechoic chamber	8.1 x 5.1 x 3.55	8.1 x 5.1	-
No.1 Shielded room	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.2 Shielded room	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.3 Shielded room	6.3 x 4.7 x 2.7	6.3 x 4.7	-
No.4 Shielded room	4.4 x 4.7 x 2.7	4.4 x 4.7	-
No.5 Shielded room	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.6 Shielded room	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.7 Shielded room	2.76 x 3.76 x 2.4	2.76 x 3.76	-
No.8 Shielded room	3.45 x 5.5 x 2.4	3.45 x 5.5	-
No.1 Measurement room	2.55 x 4.1 x 2.5	2.55 x 4.1	-

3.7 Test Setup, Data of EMI & Test instruments

Refer to Appendix 1 to 3.

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

4.1 Operating mode

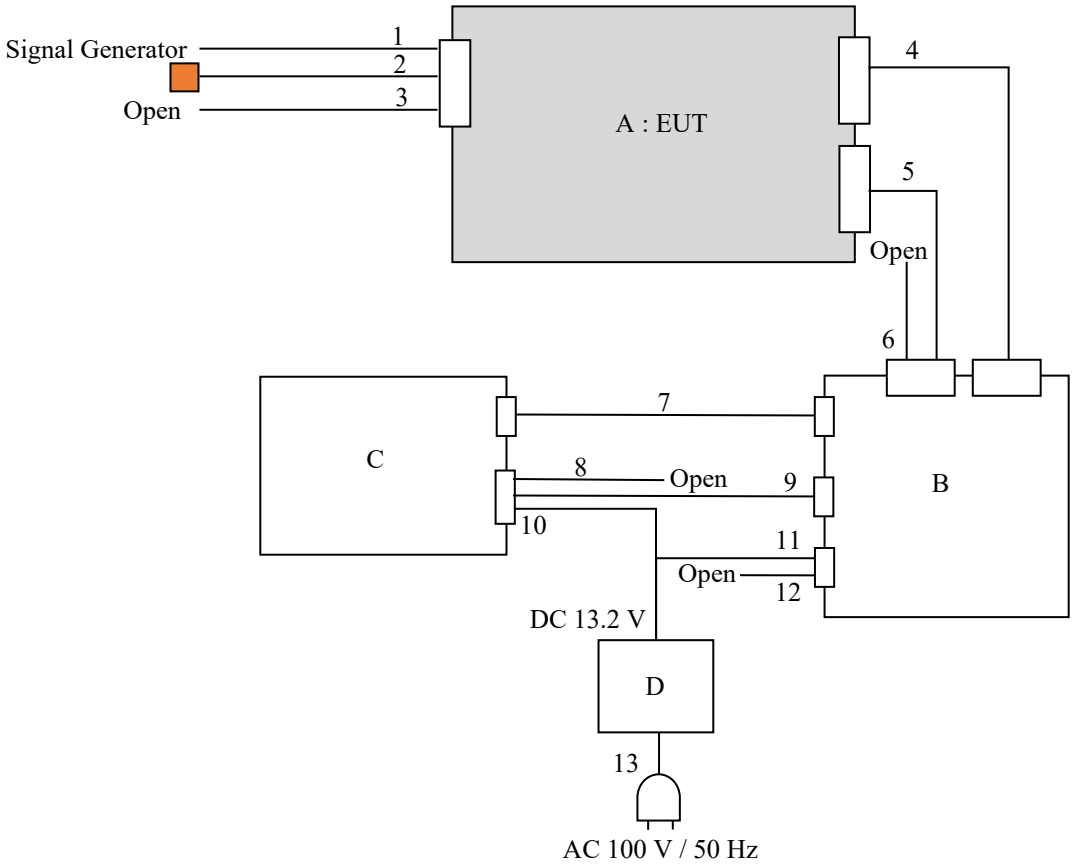
The EUT exercise program used during testing was designed to exercise the various system components in a manner similar to typical use.

Test sequence is used : FM Reception (87.75 MHz, 97.9 MHz, 107.9 MHz), Analog
Software (Firmware) : AAHMB05060000000

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

4.2 Configuration and peripherals

: Termination



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

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Car radio Tuner	CQ-TH1AN0AX	16100033	Panasonic Corporation	EUT
B	Display Audio Unit	39540-TVAA-A21	16100045	Panasonic Corporation	-
C	Display Unit	39710-TVA-A110-M1	HBZ21000025	ALPINE	-
D	Power Supply	PAN60-10A	NL002383	KIKUSUI	-

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	Antenna	0.15 + 1.2	Shielded	Shielded	-
2	Antenna	0.15 + 1.2	Shielded	Shielded	-
3	Signal	0.15 + 1.0	Unshielded	Unshielded	-
4	Signal	2.0	Unshielded	Unshielded	-
5	Signal	1.0	Unshielded	Unshielded	-
6	Signal	1.0	Unshielded	Unshielded	-
7	Signal	1.2	Unshielded	Unshielded	-
8	Signal	1.0	Unshielded	Unshielded	-
9	Signal	1.0	Unshielded	Unshielded	-
10	DC Power	1.0 + 0.15	Unshielded	Unshielded	-
11	DC Power	1.0 + 0.15	Unshielded	Unshielded	-
12	General-purpose	1.0	Unshielded	Unshielded	-
13	AC Power	2.0	Unshielded	Unshielded	-

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

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 expanded polystyrol and expanded polypropylene and the table top is covered with polycarbonate. That has very low permittivity. The rear of EUT, including its peripherals was aligned and flushed with rear of tabletop. I/O cables that were connected to the peripherals were bundled in center. They were folded back and for the forming a bundle 30 cm to 40 cm long and were hanged at a 40 cm height to the ground plane.
Photographs of the set up are shown in Appendix 1.

5.3 Test conditions

Frequency range : 30 MHz - 2 GHz
Test distance : 3 m
EUT position : Table top

5.4 Test procedure

The Radiated Electric Field Strength intensity has been measured on an anechoic chamber with a ground plane and at a distance of 3 m. Measurements were performed with quasi-peak, peak and average detector. The measuring antenna height was varied between 1 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 beamwidth of the antenna.

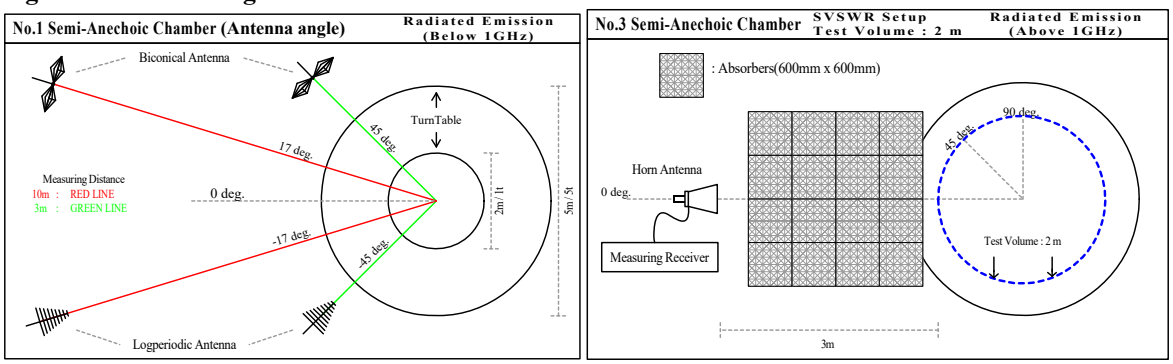
The measurements were performed for both vertical and horizontal antenna polarization. The radiated emission measurements were made with the following detector function of the test receiver.

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

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

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

Figure 1. Antenna angle



5.5 Results

Summary of the test results : Pass

SECTION 6: Antenna power conduction for receivers

6.1 Operating environment

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

6.2 Test configuration

The EUT was placed on a non-metallic table height of 0.8 m above the reference ground plane.
Photographs of the set up are shown in Appendix 1.

6.3 Test conditions

Frequency range : 30 MHz - 2 GHz
EUT position : Table top

6.4 Test procedure

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

		30 MHz -1000 MHz (Test receiver)	1 GHz – 2 GHz
Detector Type	:	QP	Peak
IF Band width	:	120 kHz	RBW: 1 MHz/ VBW: 3 MHz

6.5 Results

Summary of the test results : Pass

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.1 Semi-Anechoic Chamber

Date : 2020/02/03

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033
Remarks : Local, EUT Axis : Hori-X, Vert-X

Mode : FM Receiving (87.75 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 22 deg.C / 31 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Shunsaku Yumi

<< QP DATA >>

No.	Freq.	Reading <QP>	Ant.Fac	Loss	Gain	S.Fac	Result <QP>	Limit <QP>	Margin <QP>	Pola.	Height	Angle	Ant. Type	Comment
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	87.794	26.90	7.51	8.05	31.82	0.38	11.02	40.00	28.9	Hori.	191	241	BC	
2	175.588	21.40	16.14	9.12	31.79	-0.01	14.86	43.50	28.6	Hori.	100	1	BC	
3	263.118	30.20	12.38	6.75	31.76	0.00	17.57	46.00	28.4	Hori.	145	299	LP	
4	263.382	27.50	12.40	6.75	31.76	0.00	14.89	46.00	31.1	Hori.	117	266	LP	
5	438.971	29.60	16.32	8.13	31.85	0.00	22.20	46.00	23.8	Hori.	172	68	LP	
6	877.941	21.60	22.07	9.77	31.45	0.00	21.99	46.00	24.0	Hori.	187	98	LP	
7	87.794	26.60	7.51	8.05	31.82	0.38	10.72	40.00	29.2	Vert.	100	336	BC	
8	175.588	21.50	16.14	9.12	31.79	-0.01	14.96	43.50	28.5	Vert.	100	359	BC	
9	263.118	23.80	12.38	6.75	31.76	0.00	11.17	46.00	34.8	Vert.	100	235	LP	
10	263.382	24.40	12.40	6.75	31.76	0.00	11.79	46.00	34.2	Vert.	100	3	LP	
11	438.971	27.10	16.32	8.13	31.85	0.00	19.70	46.00	26.3	Vert.	106	226	LP	
12	877.941	21.80	22.07	9.77	31.45	0.00	22.19	46.00	23.8	Vert.	146	107	LP	

Calculation:Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac(ΔAF)[dB]
Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.1 Semi-Anechoic Chamber
Date : 2020/02/03

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033
Remarks : Local, EUT Axis : Hori-X, Vert-X

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 22 deg.C / 31 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Shunsaku Yumi

<< QP DATA >>

No.	Freq.	Reading <QP>	Ant.Fac	Loss	Gain	S.Fac	Result <QP>	Limit <QP>	Margin <QP>	Pola.	Height	Angle	Ant. Type	Comment
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	97.856	22.00	9.78	8.20	31.82	0.12	8.28	43.50	35.2	Hori.	183	0	BC	
2	97.944	22.10	9.79	8.20	31.82	0.12	8.39	43.50	35.1	Hori.	192	359	BC	
3	489.721	22.50	17.52	8.22	31.87	0.00	16.37	46.00	29.6	Hori.	100	284	LP	
4	587.665	22.90	18.90	8.52	31.95	0.00	18.37	46.00	27.6	Hori.	138	294	LP	
5	685.609	23.90	19.65	8.97	31.98	0.00	20.54	46.00	25.4	Hori.	142	108	LP	
6	783.553	25.30	20.62	9.36	31.84	0.00	23.44	46.00	22.5	Hori.	100	359	LP	
7	97.856	22.50	9.78	8.20	31.82	0.12	8.78	43.50	34.7	Vert.	100	359	BC	
8	97.944	22.50	9.79	8.20	31.82	0.12	8.79	43.50	34.7	Vert.	100	1	BC	
9	489.721	21.60	17.52	8.22	31.87	0.00	15.47	46.00	30.5	Vert.	100	325	LP	
10	587.665	22.40	18.90	8.52	31.95	0.00	17.87	46.00	28.1	Vert.	100	110	LP	
11	685.609	23.20	19.65	8.97	31.98	0.00	19.84	46.00	26.1	Vert.	100	326	LP	
12	783.553	25.10	20.62	9.36	31.84	0.00	23.24	46.00	22.7	Vert.	100	137	LP	

Calculation:Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac(ΔAF)[dB]
Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.1 Semi-Anechoic Chamber
Date : 2020/02/03

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033
Remarks : Local, EUT Axis : Hori-X, Vert-X

Mode : FM Receiving (107.9 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 22 deg.C / 31 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Shunsaku Yumi

<< QP DATA >>

No.	Freq.	Reading <QP>	Ant.Fac	Loss	Gain	S.Fac	Result <QP>	Limit <QP>	Margin <QP>	Pola.	Height	Angle	Ant. Type	Comment
	[MHz]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]		
1	107.856	26.20	11.71	8.32	31.82	-0.10	14.31	43.50	29.1	Hori.	295	216	BC	
2	107.944	26.20	11.73	8.32	31.82	-0.10	14.33	43.50	29.1	Hori.	299	223	BC	
3	215.712	25.50	11.11	6.16	31.77	0.00	11.00	43.50	32.5	Hori.	170	89	LP	
4	215.888	25.20	11.11	6.16	31.77	0.00	10.70	43.50	32.8	Hori.	175	167	LP	
5	970.703	21.60	22.20	10.14	30.78	0.00	23.16	53.90	30.7	Hori.	173	298	LP	
6	971.497	21.00	22.21	10.14	30.77	0.00	22.58	53.90	31.3	Hori.	192	304	LP	
7	107.856	22.50	11.71	8.32	31.82	-0.10	10.61	43.50	32.8	Vert.	100	1	BC	
8	107.944	22.40	11.73	8.32	31.82	-0.10	10.53	43.50	32.9	Vert.	100	355	BC	
9	215.712	24.40	11.11	6.16	31.77	0.00	9.90	43.50	33.6	Vert.	100	358	LP	
10	215.888	24.30	11.11	6.16	31.77	0.00	9.80	43.50	33.7	Vert.	100	0	LP	
11	970.703	21.20	22.20	10.14	30.78	0.00	22.76	53.90	31.1	Vert.	100	149	LP	
12	971.497	20.70	22.21	10.14	30.77	0.00	22.28	53.90	31.6	Vert.	100	316	LP	

Calculation:Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac(ΔAF)[dB]
Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

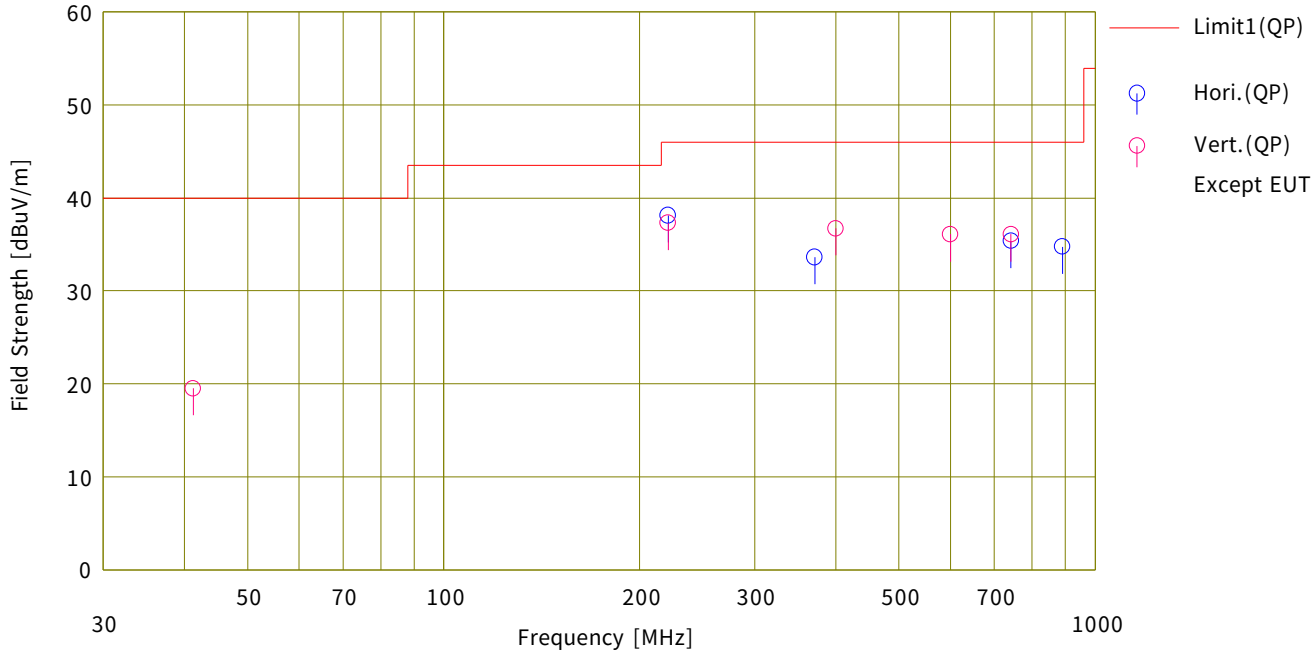
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.1 Semi-Anechoic Chamber
Date : 2020/02/03

Company	: Panasonic Corporation		Mode	: FM Receiving (97.9 MHz)_analog	
Kind of EUT	: Car radio tuner		Order No.	: 13251737S	
Model No.	: CQ-TH1AN0AX		Power	: DC 13.2 V	
Serial No.	: 16100033		Temp./Humi.	: 22 deg.C / 31 %RH	
Remarks	: **Other, EUT Axis : Hori-X, Vert-X**				

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Shunsaku Yumi



No.	Freq. [MHz]	Reading <QP> [dBuV]	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result <QP> [dBuV/m]	Limit <QP> [dBuV/m]	Margin <QP> [dB]	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
1	221.172	52.50	11.14	6.22	31.77	0.00	38.09	46.00	7.9	Hori.	143	84	LP	
2	371.247	42.50	15.09	7.81	31.78	0.00	33.62	46.00	12.3	Hori.	100	283	LP	
3	742.498	38.00	20.13	9.17	31.93	0.00	35.37	46.00	10.6	Hori.	100	63	LP	
4	890.986	34.20	22.12	9.82	31.39	0.00	34.75	46.00	11.2	Hori.	100	238	LP	
5	41.257	29.80	14.24	7.35	31.84	-0.05	19.50	40.00	20.5	Vert.	100	182	BC	
6	221.174	51.70	11.14	6.22	31.77	0.00	37.29	46.00	8.7	Vert.	100	43	LP	
7	400.002	44.70	15.79	8.03	31.81	0.00	36.71	46.00	9.2	Vert.	100	113	LP	
8	600.012	40.20	19.27	8.55	31.95	0.00	36.07	46.00	9.9	Vert.	100	141	LP	
9	742.496	38.70	20.13	9.17	31.93	0.00	36.07	46.00	9.9	Vert.	100	140	LP	

Calculation:Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac(ΔAF)[dB]
Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna **SH*: Horn Antenna

DATA OF RADIATED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2020/02/15

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033
Remarks : Local, EUT Axis : Hori-X, Vert-X Test Distance=360 cm

Mode : FM Receiving (87.75 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 21 deg.C / 40 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Kouki Yamada

<< 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>					
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[H/V]	[cm]	[deg]		
1	1578.706	34.29	48.44	25.37	3.31	41.11	1.59	23.45	37.60	53.90	73.90	30.4	36.3	Hori.	139	225	31SH3	
2	1755.882	33.55	48.96	25.40	3.50	41.26	1.59	22.78	38.19	53.90	73.90	31.1	35.7	Hori.	248	231	31SH3	
3	1578.706	33.34	50.57	25.37	3.31	41.11	1.59	22.50	39.73	53.90	73.90	31.4	34.1	Vert.	100	353	31SH3	
4	1755.882	34.79	48.89	25.40	3.50	41.26	1.59	24.02	38.12	53.90	73.90	29.8	35.7	Vert.	313	167	31SH3	

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

DATA OF RADIATED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2020/02/15

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033
Remarks : Local, EUT Axis : Hori-X, Vert-X Test Distance=360 cm

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 21 deg.C / 40 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Kouki Yamada

<< 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>					
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[H/V]	[cm]	[deg]		
1	1567.106	33.71	47.40	25.38	3.31	41.11	1.59	22.88	36.57	53.90	73.90	31.0	37.3	Hori.	100	227	31SH3	
2	1761.406	33.31	48.31	25.41	3.50	41.26	1.59	22.55	37.55	53.90	73.90	31.3	36.3	Hori.	285	117	31SH3	
3	1567.106	33.40	47.70	25.38	3.31	41.11	1.59	22.57	36.87	53.90	73.90	31.3	37.0	Vert.	100	340	31SH3	
4	1761.406	33.89	48.30	25.41	3.50	41.26	1.59	23.13	37.54	53.90	73.90	30.7	36.3	Vert.	284	192	31SH3	

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

DATA OF RADIATED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2020/02/15

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033
Remarks : Local, EUT Axis : Hori-X, Vert-X Test Distance=360 cm

Mode : FM Receiving (107.9 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 21 deg.C / 40 %RH

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Kouki Yamada

<< 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>					
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[H/V]	[cm]	[deg]		
1	1511.217	38.53	49.06	25.33	3.25	41.06	1.59	27.64	38.17	53.90	73.90	26.2	35.7	Hori.	100	41	31SH3	
2	1617.839	34.98	48.35	25.26	3.36	41.15	1.59	24.04	37.41	53.90	73.90	29.8	36.4	Hori.	203	219	31SH3	
3	1511.217	38.26	49.01	25.33	3.25	41.06	1.59	27.37	38.12	53.90	73.90	26.5	35.7	Vert.	133	331	31SH3	
4	1617.839	34.98	48.73	25.26	3.36	41.15	1.59	24.04	37.79	53.90	73.90	29.8	36.1	Vert.	350	186	31SH3	

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

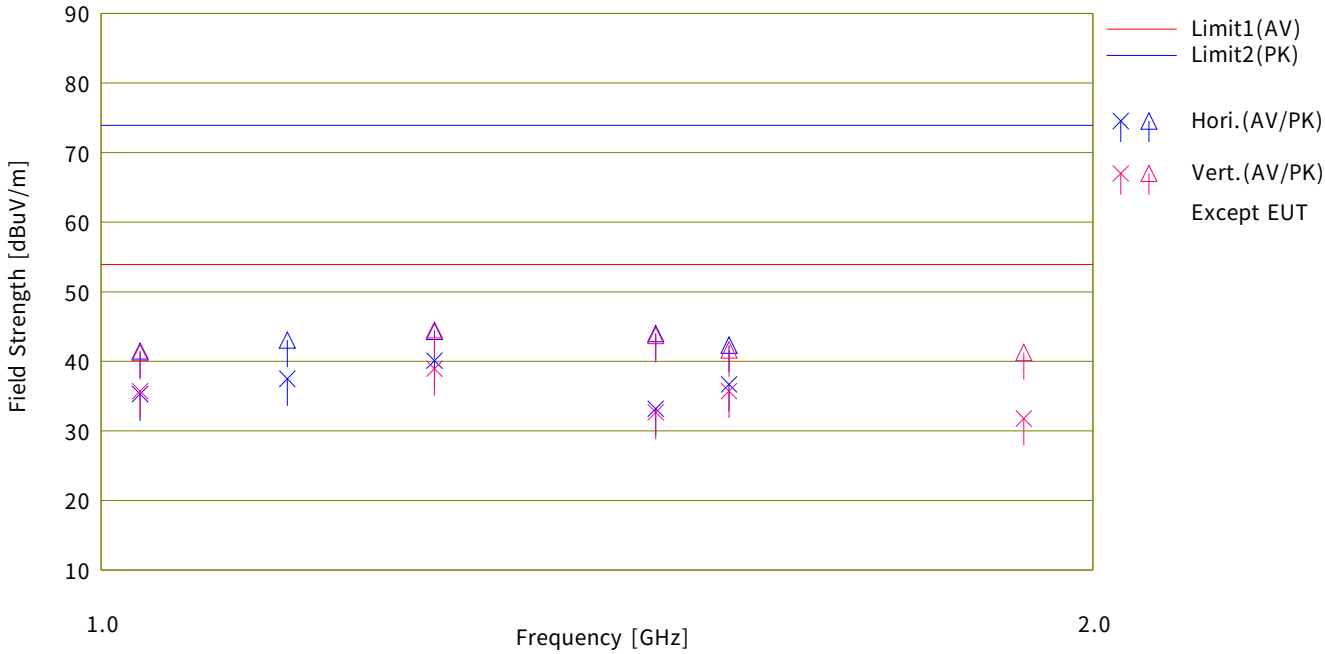
DATA OF RADIATED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2020/02/15

Company	: Panasonic Corporation	Mode	: FM Receiving (97.9 MHz)_analog
Kind of EUT	: Car radio tuner	Order No.	: 13251737S
Model No.	: CQ-TH1AN0AX	Power	: DC 13.2 V
Serial No.	: 16100033	Temp./Humi.	: 21 deg.C / 40 %RH
Remarks	: Other, EUT Axis : Hori-X, Vert-X Test Distance=360 cm		

Limit : FCC_Part 15 Subpart B(15.109)_Class B

Engineer : Kouki Yamada



No.	Freq.	Reading <AV>	Reading <PK>	Ant.Fac	Loss	Gain	D.Fac	Result <AV>	Result <PK>	Limit <AV>	Limit <PK>	Margin <AV>	Margin <PK>	Pola.	Height	Angle	Ant. Type	Comment
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[H/V]	[cm]	[deg]		
1	1039.494	47.37	53.54	24.70	2.68	41.04	1.59	35.30	41.47	53.90	73.90	18.6	32.4	Hori.	209	339	31SH3	
2	1187.992	48.82	54.36	25.26	2.86	41.04	1.59	37.49	43.03	53.90	73.90	16.4	30.8	Hori.	139	324	31SH3	
3	1336.494	50.66	54.84	25.85	3.04	41.05	1.59	40.09	44.27	53.90	73.90	13.8	29.6	Hori.	134	241	31SH3	
4	1559.244	44.00	54.81	25.38	3.30	41.10	1.59	33.17	43.98	53.90	73.90	20.7	29.9	Hori.	202	61	31SH3	
5	1633.492	47.62	53.27	25.24	3.38	41.16	1.59	36.67	42.32	53.90	73.90	17.2	31.5	Hori.	100	114	31SH3	
6	1039.495	47.77	53.30	24.70	2.68	41.04	1.59	35.70	41.23	53.90	73.90	18.2	32.6	Vert.	100	296	31SH3	
7	1336.493	49.50	55.07	25.85	3.04	41.05	1.59	38.93	44.50	53.90	73.90	14.9	29.4	Vert.	123	37	31SH3	
8	1559.244	43.49	54.55	25.38	3.30	41.10	1.59	32.66	43.72	53.90	73.90	21.2	30.1	Vert.	108	201	31SH3	
9	1633.494	46.68	52.58	25.24	3.38	41.16	1.59	35.73	41.63	53.90	73.90	18.1	32.2	Vert.	106	324	31SH3	
10	1930.490	41.87	51.34	26.05	3.67	41.40	1.59	31.78	41.25	53.90	73.90	22.1	32.6	Vert.	194	194	31SH3	

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

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 16/Feb/2020

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033

Mode : FM Receiving (87.75 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 21 deg.C / 34 %RH

Remarks : Local

Engineer : Yusuke Tanikawara

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

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
87.75 MHz	87.794	----	16.6	-7.1	----	9.5	51.7	42.2
	175.588	----	16.5	-6.9	----	9.6	51.7	42.1
	263.382	----	16.8	-6.8	----	10.0	51.7	41.7
	351.176	----	16.6	-6.6	----	10.0	51.7	41.7
	438.971	----	16.7	-6.4	----	10.3	51.7	41.4
	526.765	----	16.6	-6.2	----	10.4	51.7	41.3
	614.559	----	16.7	-6.0	----	10.7	51.7	41.0
	702.353	----	16.5	-5.8	----	10.7	51.7	41.0
	790.147	----	16.6	-5.8	----	10.8	51.7	40.9
	877.941	----	16.7	-5.9	----	10.8	51.7	40.9
	965.735	----	16.7	-5.9	----	10.8	51.7	40.9
	1053.529	34.1	----	-6.0	28.1	----	51.7	23.6
	1141.323	34.3	----	-6.1	28.2	----	51.7	23.5
	1755.882	33.7	----	-5.4	28.3	----	51.7	23.4
	87.706	----	16.5	-7.1	----	9.4	51.7	42.3
	175.412	----	16.5	-6.9	----	9.6	51.7	42.1
	263.118	----	16.7	-6.8	----	9.9	51.7	41.8
	350.824	----	16.5	-6.6	----	9.9	51.7	41.8
	438.530	----	16.7	-6.4	----	10.3	51.7	41.4
	526.235	----	16.7	-6.2	----	10.5	51.7	41.2
	613.941	----	16.6	-6.0	----	10.6	51.7	41.1
	701.647	----	16.5	-5.8	----	10.7	51.7	41.0
	789.353	----	16.6	-5.8	----	10.8	51.7	40.9
	877.059	----	16.6	-5.9	----	10.7	51.7	41.0
	964.765	----	16.7	-5.9	----	10.8	51.7	40.9
	1052.471	34.3	----	-6.0	28.3	----	51.7	23.4
	1140.177	34.1	----	-6.1	28.0	----	51.7	23.7
	1578.706	33.9	----	-5.7	28.2	----	51.7	23.5

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

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 16/Feb/2020

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 21 deg.C / 34 %RH

Remarks : Local

Engineer : Yusuke Tanikawara

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

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
97.9 MHz	97.944	----	16.5	-7.1	----	9.4	51.7	42.3
	195.888	----	16.4	-6.9	----	9.5	51.7	42.2
	293.832	----	16.6	-6.7	----	9.9	51.7	41.8
	391.776	----	16.7	-6.6	----	10.1	51.7	41.6
	489.721	----	16.4	-6.2	----	10.2	51.7	41.5
	587.665	----	16.3	-6.1	----	10.2	51.7	41.5
	685.609	----	16.3	-5.8	----	10.5	51.7	41.2
	783.553	----	16.4	-5.8	----	10.6	51.7	41.1
	881.497	----	18.0	-5.9	----	12.1	51.7	39.6
	979.441	----	16.5	-5.9	----	10.6	51.7	41.1
	1077.385	33.2	----	-6.1	27.1	----	51.7	24.6
	1175.329	33.9	----	-6.1	27.8	----	51.7	23.9
	1567.106	32.7	----	-5.7	27.0	----	51.7	24.7
	97.856	----	16.5	-7.1	----	9.4	51.7	42.3
	195.712	----	16.4	-6.9	----	9.5	51.7	42.2
	293.568	----	16.9	-6.7	----	10.2	51.7	41.5
	391.424	----	16.9	-6.6	----	10.3	51.7	41.4
	489.280	----	16.4	-6.2	----	10.2	51.7	41.5
	587.135	----	16.4	-6.1	----	10.3	51.7	41.4
	684.991	----	16.3	-5.8	----	10.5	51.7	41.2
	782.847	----	16.4	-5.8	----	10.6	51.7	41.1
	880.703	----	16.9	-5.9	----	11.0	51.7	40.7
	978.559	----	16.5	-5.9	----	10.6	51.7	41.1
	1076.415	33.3	----	-6.1	27.2	----	51.7	24.5
	1174.271	33.0	----	-6.1	26.9	----	51.7	24.8
	1761.406	33.1	----	-5.4	27.7	----	51.7	24.0

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

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 16/Feb/2020

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033

Mode : FM Receiving (107.9 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 21 deg.C / 34 %RH

Remarks : Local

Engineer : Yusuke Tanikawara

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

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
107.9 MHz	107.944	----	16.4	-7.1	----	9.3	51.7	42.4
	215.888	----	16.7	-6.9	----	9.8	51.7	41.9
	323.832	----	16.6	-6.7	----	9.9	51.7	41.8
	431.776	----	17.6	-6.4	----	11.2	51.7	40.5
	539.721	----	16.5	-6.1	----	10.4	51.7	41.3
	647.665	----	16.4	-5.8	----	10.6	51.7	41.1
	755.609	----	16.4	-5.8	----	10.6	51.7	41.1
	863.553	----	16.5	-5.9	----	10.6	51.7	41.1
	971.497	----	16.6	-5.9	----	10.7	51.7	41.0
	1079.441	34.4	----	-6.1	28.3	----	51.7	23.4
	1187.385	33.7	----	-6.1	27.6	----	51.7	24.1
	1511.217	33.8	----	-5.7	28.1	----	51.7	23.6
	107.856	----	16.4	-7.1	----	9.3	51.7	42.4
	215.712	----	16.7	-6.9	----	9.8	51.7	41.9
	323.568	----	16.5	-6.7	----	9.8	51.7	41.9
	431.424	----	16.7	-6.4	----	10.3	51.7	41.4
	539.280	----	16.6	-6.1	----	10.5	51.7	41.2
	647.135	----	16.4	-5.8	----	10.6	51.7	41.1
	754.991	----	16.4	-5.8	----	10.6	51.7	41.1
	862.847	----	16.6	-5.9	----	10.7	51.7	41.0
	970.703	----	16.6	-5.9	----	10.7	51.7	41.0
	1078.559	34.4	----	-6.1	28.3	----	51.7	23.4
	1186.415	34.5	----	-6.1	28.4	----	51.7	23.3
	1617.839	33.6	----	-5.7	27.9	----	51.7	23.9

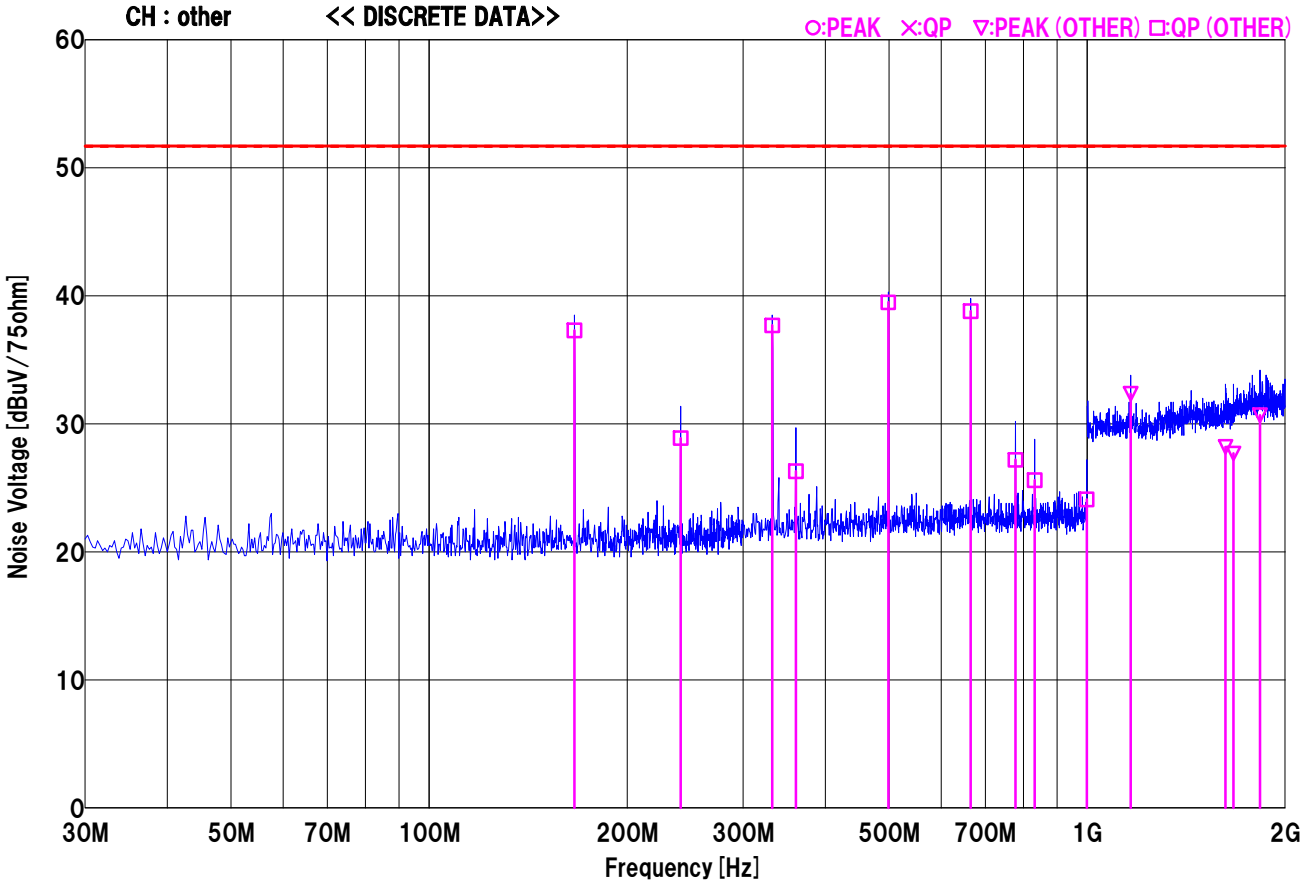
Calculation:Rsult [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB]

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 16/Feb/2020

Company	: Panasonic Corporation	Mode	: FM Receiving (97.9 MHz)_analog
Kind of EUT	: Car radio tuner	Order No.	: 13251737S
Model No.	: CQ-TH1AN0AX	Power	: DC 13.2 V
Serial No.	: 16100033	Temp./Humi.	: 21 deg.C / 34 %RH
Remarks	: Other		
		Engineer	: Yusuke Tanikawara

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



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

DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 16/Feb/2020

Company : Panasonic Corporation
Kind of EUT : Car radio tuner
Model No. : CQ-TH1AN0AX
Serial No. : 16100033

Mode : FM Receiving (97.9 MHz)_analog
Order No. : 13251737S
Power : DC 13.2 V
Temp./Humi. : 21 deg.C / 34 %RH

Remarks : Other

Engineer : Yusuke Tanikawara

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

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*166.350	----	44.2	-6.9	----	37.3	51.7	14.4
	*241.141	----	35.7	-6.8	----	28.9	51.7	22.8
	*332.201	----	44.3	-6.6	----	37.7	51.7	14.0
	*360.901	----	32.9	-6.6	----	26.3	51.7	25.4
	*498.804	----	45.7	-6.2	----	39.5	51.7	12.2
	*665.406	----	44.6	-5.8	----	38.8	51.7	12.9
	*778.108	----	33.0	-5.8	----	27.2	51.7	24.5
	*832.009	----	31.4	-5.8	----	25.6	51.7	26.1
	*998.612	----	30.1	-6.0	----	24.1	51.7	27.6
	*1165.000	38.5	----	-6.1	32.4	----	51.7	19.3
	*1623.000	33.9	----	-5.7	28.2	----	51.7	23.5
	*1669.000	33.3	----	-5.6	27.7	----	51.7	24.0
	*1831.000	36.1	----	-5.4	30.7	----	51.7	21.0

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

APPENDIX 2

Test Instruments

EMI test equipment

Test Name	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Calibration Interval (Month)
AT	COTS-SEMI-2	144866	EMI Software for AV Equipment	TSJ	TEPTO-DV(AT,TV)	2	-	-
AT	KTM75-01	146458	Terminator	TME	CT01-BP	-	-	-
AT	SAF-07	145006	Pre Amplifier	TSJ	MLA-8k03-D01-35	81212	2019/06/17	12
AT	SCC-AT1/AT2/KMP-09	180424	Coaxial cable,Matching pad	TAMAGAWA	5D2W/ZT-130	-/1454514E	2019/06/17	12
AT	SMC75-01	146281	Coupling Circuit	JFW	75PD-045BNC 2 to 1	512019	2019/02/05	12
AT	SOS-06	146294	Humidity Indicator	A&D	AD-5681	4062118	-	-
AT,RE	STR-01	145790	Test Receiver	Rohde & Schwarz	ESU40	100093	2019/04/14	12
AT,RE	STS-03	146210	Digital Hitester	HIOKI	3805-50	80997823	2019/10/01	12
RE	COTS-SEMI-5	170932	EMI Software	TSJ	TEPTO-DV3(RE,CE,ME,PE)	-	-	-
RE	KAT6-04	144899	Attenuator	Inmet	18N-6dB	-	2019/12/05	12
RE	KBA-01	146343	Biconical Antenna	Schwarzbeck	BBA9106	1748	2019/06/05	12
RE	KJM-02	146432	Measure	TAJIMA	GL19-55	-	-	-
RE	KJM-09	145929	Measure	KOMELON	KMC-36	-	-	-
RE	SAEC-01(NSA)	145597	Semi-Anechoic Chamber	TDK	SAEC-01(NSA)	1	2019/04/02	12
RE	SAEC-03(SVSWR)	145566	Semi-Anechoic Chamber	TDK	SAEC-03(SVSWR)	3	2019/05/03	12
RE	SAF-01	145003	Pre Amplifier	SONOMA	310N	290211	2019/02/05	12
RE	SAF-06	145005	Pre Amplifier	Toyo Corporation	TPA0118-36	1440491	2019/02/08	12
RE	SAT3-09	144959	Attenuator	JFW	50HF-003N	-	2019/08/06	12
RE	SCC-A1/A3/A5/A7/A8/A13/SRSE-01	144967	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-269(RF Selector)	2019/04/19	12
RE	SCC-A2/A4/A6/A7/A8/A13/SRSE-01	144968	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-269(RF Selector)	2019/04/19	12
RE	SCC-G40	166491	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S005	2020/01/08	12
RE	SCC-G43	156380	Coaxial Cable	HUBER+SUNER	SUCOFLEX_104_E	SN MY 13406/4E	2019/07/03	12
RE	SCC-G58	183047	Coaxial Cable	HUBER+SUNER	SUCOFLEX 104	800287/4A	2019/07/23	12
RE	SHA-03	145501	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	2019/06/26	12
RE	SLA-05	145527	Logperiodic Antenna	Schwarzbeck	VUSLP9111B	193	2019/04/01	12
RE	SOS-20	191837	Humidity Indicator	CUSTOM	CTH-201	-	2019/12/12	12
RE	SOS-23	191840	Humidity Indicator	CUSTOM	CTH-201	-	2019/12/12	12
RE	STR-08	150463	Test Receiver	Rohde & Schwarz	ESW44	101581	2019/11/22	12
RE	STS-01	145792	Digital Hitester	HIOKI	3805-50	80997812	2019/10/01	12

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

The expiration date of the calibration is the end of the expired month.
As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations.

All equipment is calibrated with valid calibrations . Each measurement data is traceable to the national or international standards
Test Item：
RE: Radiated emission,
AT: Antenna terminal disturbance voltage