

DATA OF ANTENNA TERMINAL TEST

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

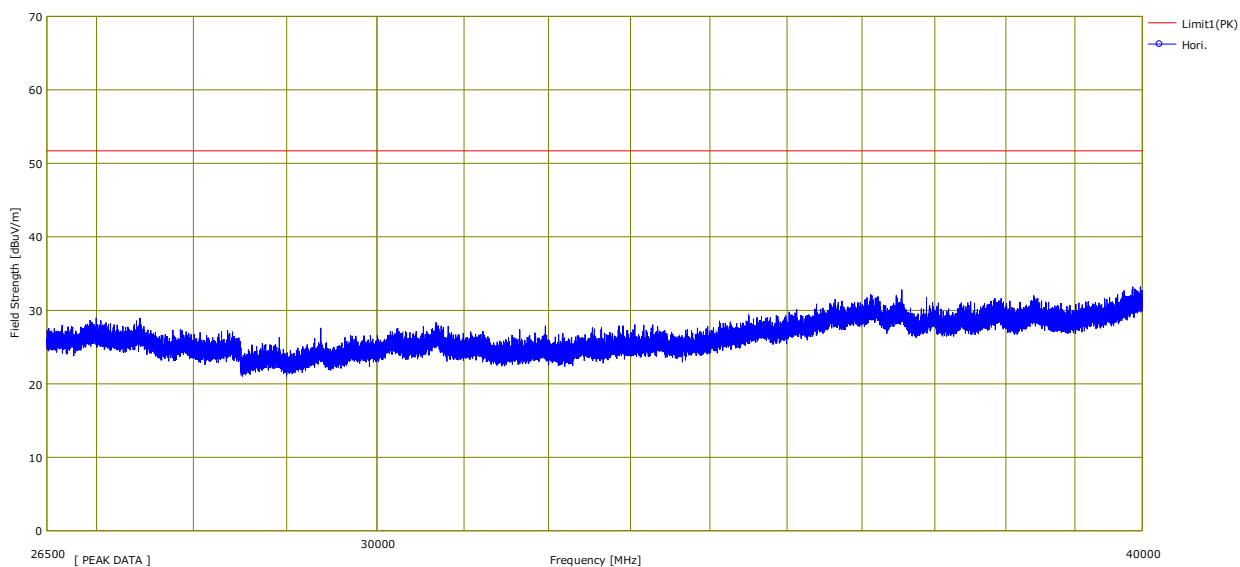
Date :2020/08/27

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)_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]

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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]
Other	1875.000	51.0	-	-30.32	20.68	-	51.7	31.0
	2111.000	55.7	-	-30.27	25.43	-	51.7	26.2
	2875.000	50.9	-	-29.84	21.06	-	51.7	30.6
	3494.350	52.9	-	-29.86	23.04	-	51.7	28.6
	4780.770	53.3	-	-30.58	22.72	-	51.7	28.9
	5057.830	54.7	-	-30.67	24.03	-	51.7	27.6
	7967.960	51.3	-	-27.39	23.91	-	51.7	27.7
	9561.530	50.4	-	-26.13	24.27	-	51.7	27.4
	10555.000	49.8	-	-26.09	23.71	-	51.7	27.9
	14342.230	52.3	-	-28.00	24.30	-	51.7	27.4

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

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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	1410.208	50.8	-	-30.42	20.38	-	51.7	31.3
	1762.760	51.2	-	-30.39	20.81	-	51.7	30.8
	2115.312	51.0	-	-30.26	20.74	-	51.7	30.9
	2467.864	50.5	-	-30.06	20.44	-	51.7	31.2
	3172.968	51.1	-	-29.84	21.26	-	51.7	30.4
	3525.520	75.1	-	-29.86	45.24	-	51.7	6.4
	7051.040	52.8	-	-29.11	23.69	-	51.7	28.0

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

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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	1560.192	51.8	-	-30.53	21.27	-	51.7	30.4
	1755.216	51.3	-	-30.41	20.89	-	51.7	30.8
	1950.240	51.5	-	-30.25	21.25	-	51.7	30.4
	2340.288	50.2	-	-30.15	20.05	-	51.7	31.6
	3120.384	51.2	-	-29.83	21.37	-	51.7	30.3
	3510.432	75.5	-	-29.87	45.63	-	51.7	6.0
	7020.864	52.4	-	-29.15	23.25	-	51.7	28.4

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

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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	1299.456	50.5	-	-30.27	20.23	-	51.7	31.4
	1732.608	51.4	-	-30.42	20.98	-	51.7	30.7
	2165.760	50.6	-	-30.26	20.34	-	51.7	31.3
	3032.064	51.0	-	-29.82	21.18	-	51.7	30.5
	3465.216	77.3	-	-29.87	47.43	-	51.7	4.2
	6930.432	54.3	-	-29.27	25.03	-	51.7	26.6

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

APPENDIX 3: Test instruments

Test equipment

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	CCC-S11-R	143169	Coaxial Cable	Fujikura,Suhner,Suhner,Agilent,Suhner,-,Suhner	SD-2W,SF106,SF104,8496B+8494B,SF106,-,SF106	MY42143380,US00431042 (Step Att)	2019/11/19	12
RE	CBL-09	143122	LOGBICON	Schwarzbeck Mess - Elektronik	VULB 9168	508	2020/04/07	12
RE	CAT5-04	178807	5dB Fixed Atten.	PASTERNAK	PE7047-5	none	2020/04/01	12
RE	CAF-16	142936	Pre-Amplifier	SONOMA INSTRUMENT	310N	325015	2020/05/12	12
RE	CTR-02	144194	Test Receiver	Rohde & Schwarz	ESCI	100601	2019/09/04	12
EMI	CSCL-16	143655	Ruler	TAJIMA	G3 gold	none	-	-
EMI	COS-11	143543	Temperature, Humidity & Atmospheric Logger	T&D	TR-73U	F8060468	2020/07/21	12
EMI	CTS-13	144215	Digital Multimeter	Fluke Corporation	FLK-83-V	14610320	2019/10/27	12
EMI	COTS-CEMI-03	PRE0189702	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3 (RE,CE,ME,PE)	-	-	-
RE (GHz)	TSA-01	143642	Spectrum Analyzer	Keysight Technologies Inc	N9030A	MY53310670 Version A.13.12	2020/05/19	12
RE (GHz)	CAF-22	142940	Pre-Amplifier	Micro Wave Factory	MPR-1G26.5-35	161399	2020/06/08	12
RE (GHz)	CCC-G14	192241	Microwave Cable	Huber+Suhner	SF104/PC35m/PC35m/1000mm	805411/4	2020/01/15	12
RE (GHz)	CCC-G17	192244	Microwave Cable	Huber+Suhner	SF104/11N/11PC35/8000MM	808996/4	2020/01/15	12
RE (GHz)	CHA-25	143456	Double Ridged Wave Guide	ETS-Lindgren	3115	00204573	2020/02/08	12
RE (GHz)	CHA-07	143438	Double Ridged Horn	ETS-Lindgren	3160-09	00166043	2020/06/06	12
RE (GHz)	CAF-19	142937	Pre-Amplifier	TOYO	HAP18-26W	00000035	2020/06/09	12
RE (GHz)	CCC-W09	143113	Micro Wave Cable	Suhner	SUCOFLEX104	MY588/4	2020/07/05	12
RE (GHz)	CHA-28	146356	Horn Antenna	ETS LINDGREN	3116	46543	2020/02/08	12
RE (GHz)	CCC-G13	171928	Microwave Cable	Huber+Suhner	SF102/SKmm/SKmm/1000mm	801389	2020/07/05	12
RE (GHz)	CCC-W10	142992	Micro Wave Cable	Suhner	SUCOFLEX102	MY010/2A	2020/07/05	12
RE (GHz)	KAF-06	144880	Pre Amplifier	TSJ (Techno Science Japan)	MLA-1840B02-35	-	2020/04/09	12
AT	CTR-01	144193	Test Receiver	Rohde & Schwarz	ESU40	100426	2020/04/21	12
AT	CCC-W01	143109	Micro Wave Cable	Suhner	SUCOFLEX102	MY3662/2	2020/05/15	12
AT	CCC-W02	143110	Micro Wave Cable	Suhner	SUCOFLEX102	MY3773/2	2020/05/15	12
AT	CAF-02	142925	Pre-Amplifier	Hewlett Packard	8447D	2944A07219	2020/07/09	12
AT	CAF-22	142940	Pre-Amplifier	Micro Wave Factory	MPR-1G26.5-35	161399	2020/06/08	12
AT	CAF-19	142937	Pre-Amplifier	TOYO	HAP18-26W	00000035	2020/06/09	12
AT	CAT10-17	143023	10dB Fixed Atten.	Weinschel - API Technologies Corp	54A-10	56251	2020/05/15	12
AT	CIMT-02	144831	Impedance Transfomer	TAMAGAWA	ZT-130	1011101	2020/01/10	12

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 test

AT: Antenna Terminal test

End of Report