

APPENDIX 2: Data of EMI test

Radiated Emission (below 1GHz)
Antenna: Receiver

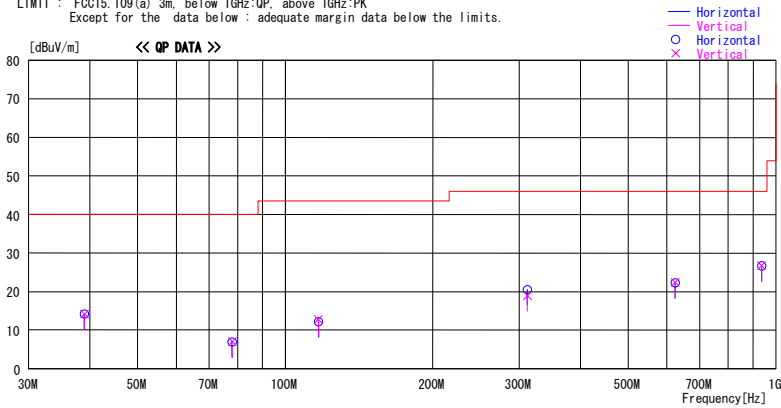
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2008/08/25

Company : DENSO CORPORATION Report No. : 29AE0107-HO-01
Kind of EUT : Remote Keyless Entry System (Receiver) Power : DC 5.0V
Model No. : 13CZK Temp./Humi. : 23 deg.C. / 76 %
Serial No. : No.1 Enginner : Takayuki Shimada

Mode / Remarks : Receiving 314.35MHz, Antenna:Receiver, Max axis(H:Z, V:Z)

LIMIT : FCC15.109(a) 3m, below 1GHz:QP, above 1GHz:PK
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg.]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
38.981	22.1	QP	14.0	-21.9	14.2	0	300	Hori.	40.0	25.8	
38.981	22.1	QP	14.0	-21.9	14.2	0	100	Vert.	40.0	25.8	
77.963	21.9	QP	6.4	-21.3	7.0	0	300	Hori.	40.0	33.0	
77.963	22.0	QP	6.4	-21.3	7.1	11	100	Vert.	40.0	32.9	
116.944	21.6	QP	11.5	-20.9	12.2	0	300	Hori.	43.5	31.3	
116.944	22.2	QP	11.5	-20.9	12.8	56	100	Vert.	43.5	30.7	
311.850	24.7	QP	14.8	-19.0	20.5	0	100	Hori.	46.0	25.5	
311.850	23.1	QP	14.8	-19.0	18.9	182	184	Vert.	46.0	27.1	
623.700	21.4	QP	19.6	-18.7	22.3	0	100	Hori.	46.0	23.7	
623.700	21.5	QP	19.6	-18.7	22.4	0	100	Vert.	46.0	23.6	
935.550	20.9	QP	22.2	-16.4	26.7	0	100	Hori.	46.0	19.3	
935.550	20.9	QP	22.2	-16.4	26.7	0	100	Vert.	46.0	19.3	

CHART WITH FACTOR ANT TYPE: -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

*The limit is rounded down to one decimal place.

*The test result is rounded off to one or two decimal places, so some differences might be observed.

Radiated Emission (below 1GHz)
Antenna: Trunk

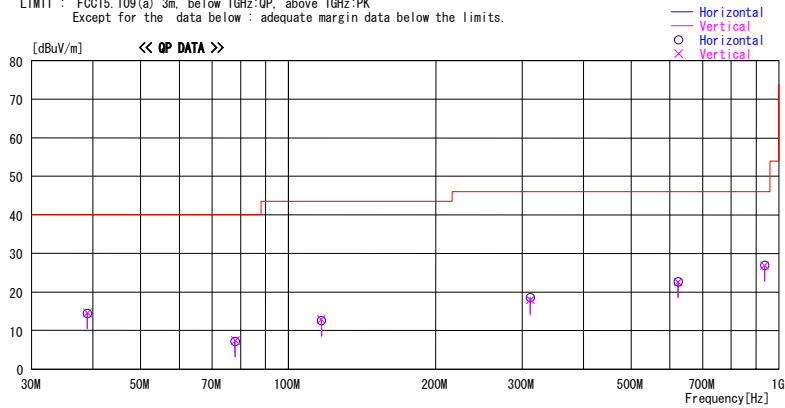
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Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg.]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
38.981	22.4	QP	14.0	-21.9	14.5	0	300	Hori.	40.0	25.5	
38.981	22.5	QP	14.0	-21.9	14.6	270	100	Vert.	40.0	25.4	
77.963	22.1	QP	6.4	-21.3	7.2	0	300	Hori.	40.0	32.8	
77.963	22.3	QP	6.4	-21.3	7.4	0	100	Vert.	40.0	32.6	
116.944	22.0	QP	11.5	-20.9	12.6	198	300	Hori.	43.5	30.9	
116.944	22.3	QP	11.5	-20.9	12.9	93	100	Vert.	43.5	30.6	
311.850	22.8	QP	14.8	-19.0	18.6	176	171	Hori.	46.0	27.4	
311.850	22.2	QP	14.8	-19.0	18.0	178	222	Vert.	46.0	28.0	
623.700	21.7	QP	19.6	-18.7	22.6	0	100	Hori.	46.0	23.4	
623.700	21.7	QP	19.6	-18.7	22.6	0	100	Vert.	46.0	23.4	
935.550	21.1	QP	22.2	-16.4	26.9	0	100	Hori.	46.0	19.1	
935.550	21.0	QP	22.2	-16.4	26.8	0	100	Vert.	46.0	19.2	

CHART WITH FACTOR ANT TYPE: -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
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Radiated Emission (above 1GHz)
Antenna: Receiver

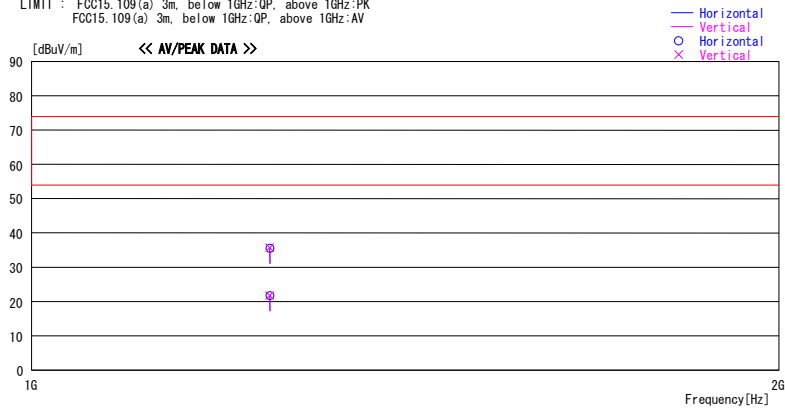
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LIMIT : FCC15.109(a) 3m, below 1GHz:QP, above 1GHz:PK
FCC15.109(a) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss &	Level	Angle	Height	Polar.	Limit	Margin	Comment
			Factor [dB/m]	Gain [dB]							
1247.400	42.1	PK	24.8	-31.3	35.6	0	100	Hori.	73.9	38.3	
1247.400	28.2	AV	24.8	-31.3	21.7	0	100	Hori.	53.9	32.2	
1247.400	42.2	PK	24.8	-31.3	35.7	0	100	Vert.	73.9	38.2	
1247.400	28.2	AV	24.8	-31.3	21.7	0	100	Vert.	53.9	32.2	

CHART: WITH FACTOR ANT TYPE: -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
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Radiated Emission (above 1GHz)
Antenna: Trunk

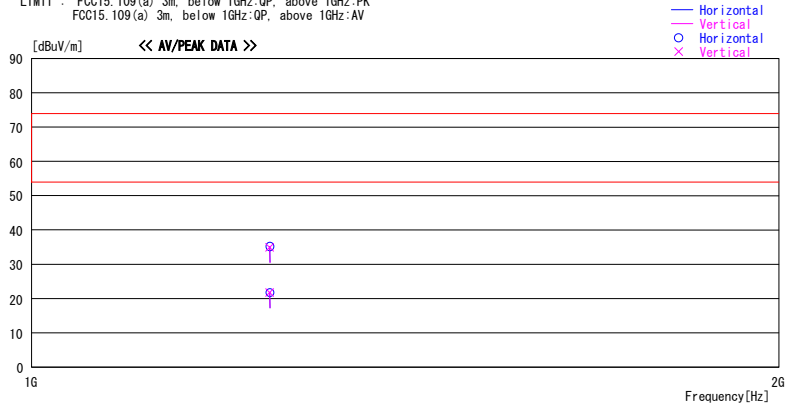
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Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg.]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss & Gain [dB]							
1247.400	41.7	PK	24.8	-31.3	35.2	0	100	Hori.	73.9	38.7	
1247.400	28.2	AV	24.8	-31.3	21.7	0	100	Hori.	53.9	32.2	
1247.400	41.4	PK	24.8	-31.3	34.9	0	100	Vert.	73.9	39.0	
1247.400	28.2	AV	24.8	-31.3	21.7	0	100	Vert.	53.9	32.2	

CHART WITH FACTOR ANT TYPE: -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
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APPENDIX 3: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2008/04/17 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	RE	2007/12/27 * 12
MJM-05	Measure	PROMART	SEN1955	RE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE	-
MRENT-62	Spectrum Analyzer	Agilent	E4448A	RE	2007/11/27 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	RE	2008/04/02 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/10/21 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2007/10/21 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2008/02/15 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2007/11/13 * 12
MPA-09	Pre Amplifier	Agilent	8447D	RE	2007/09/13 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2008/01/19 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2008/05/12 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2007/09/27 * 12

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

All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

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

Test Item:

RE: Radiated emission

UL Japan, Inc.

Head Office EMC Lab.

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

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124