

**APPENDIX 2: Data of EMI test**

**Radiated Emission**

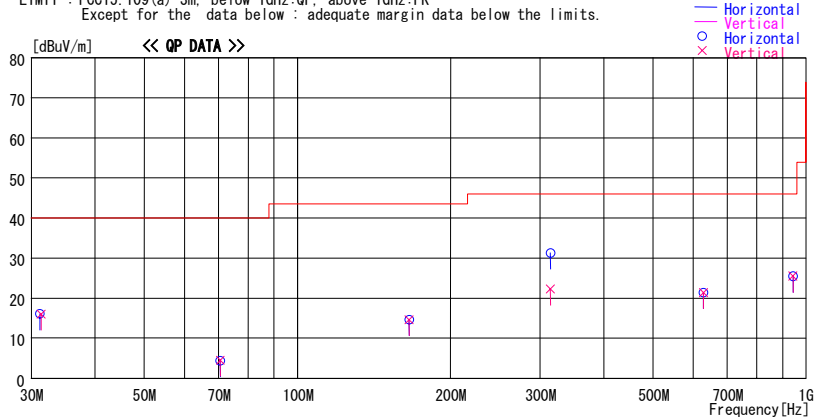
**DATA OF RADIATED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber  
Date : 2008/09/10

Company : DENSO CORPORATION Report No. : 29BE0049-HO-01  
Kind of EUT : Remote Keyless Entry System (Receiver) Power : DC 5.0V  
Model No. : 13CZM Temp./Humi. : 25deg. C / 58%  
Serial No. : No. 1 Engineer : Kazuya Yoshioka

Mode / Remarks : Receiving 314.35MHz Worst-axis (Hor:Z Ver:X)

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	Loss&	Level	Angle [Deg]	Height [cm]	Polar.	Limit	Margin
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]
31.168	22.8	QP	18.3	-25.0	16.1	359	300	Hori.	40.0	23.9
31.357	22.8	QP	18.2	-25.0	16.0	359	100	Vert.	40.0	24.0
70.498	22.2	QP	6.6	-24.3	4.5	359	100	Vert.	40.0	35.5
70.500	22.1	QP	6.6	-24.3	4.4	359	300	Hori.	40.0	35.6
165.854	22.1	QP	15.7	-23.2	14.6	359	300	Hori.	43.5	28.9
165.856	22.1	QP	15.7	-23.2	14.6	359	100	Vert.	43.5	28.9
314.250	29.2	QP	15.0	-21.9	22.3	37	100	Vert.	46.0	23.7
314.250	38.2	QP	15.0	-21.9	31.3	10	147	Hori.	46.0	14.7
628.500	22.0	QP	19.4	-20.0	21.4	359	100	Hori.	46.0	24.6
628.500	22.0	QP	19.4	-20.0	21.4	359	100	Vert.	46.0	24.6
942.750	20.7	QP	22.1	-17.3	25.5	359	100	Hori.	46.0	20.5
942.750	20.7	QP	22.1	-17.3	25.5	359	100	Vert.	46.0	20.5

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**

**DATA OF RADIATED EMISSION TEST**

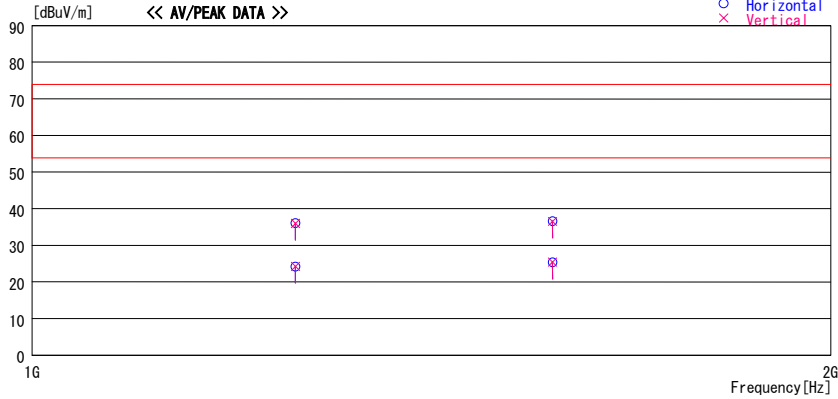
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber  
Date : 2008/09/10

Company : DENSO CORPORATION  
Kind of EUT : Remote Keyless Entry System(Receiver)  
Model No. : 13CZM  
Serial No. : No.1  
Report No. : 29BE0049-HO-01  
Power : DC 5.0V  
Temp./Humi. : 25deg. C / 58%  
Engineer : Kazuya Yoshioka

Mode / Remarks : Receiving 314.35MHz Worst-axis(Hor:Z Ver:X)

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

— Horizontal  
— Vertical  
○ Horizontal  
× Vertical



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit	Margin
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]
1257.000	43.8	PK	25.0	-32.7	36.1	0	100	Hor.i.	73.9	37.8
1257.000	43.6	PK	25.0	-32.7	35.9	0	100	Vert.	73.9	38.0
1257.000	31.9	AV	25.0	-32.7	24.2	0	100	Hor.i.	53.9	29.7
1257.000	31.9	AV	25.0	-32.7	24.2	0	100	Vert.	53.9	29.7
1571.250	42.6	PK	25.7	-31.6	36.7	0	100	Hor.i.	73.9	37.2
1571.250	42.4	PK	25.7	-31.6	36.5	0	100	Vert.	73.9	37.4
1571.250	31.3	AV	25.7	-31.6	25.4	0	100	Hor.i.	53.9	28.5
1571.250	31.3	AV	25.7	-31.6	25.4	0	100	Vert.	53.9	28.5

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.

### **APPENDIX 3: Test instruments**

#### **EMI test equipment**

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-03	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2008/03/25 * 12
MAT-30	Attenuator(6dB)	TME	UFA-01	RE	2008/03/10 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	RE	2008/01/12 * 12
MCC-51	Coaxial cable	UL Japan	-	RE	2008/07/18 * 12
MCC-56	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2008/03/12 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2008/04/23 * 12
MJM-06	Measure	PROMART	SEN1955	RE	-
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2008/01/12 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	RE	2008/01/10 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	RE	2008/03/13 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	RE	2008/03/06 * 12
MSA-09	Spectrum Analyzer	Advantest	R3273	RE	2007/12/21 * 12
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE	-
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	RE	2008/06/12 * 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**

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