APPENDIX 2: Data of EMI test

Radiated Emission

Variation No. 3, Internal Antenna

DATA OF RADIATED EMISSION TEST

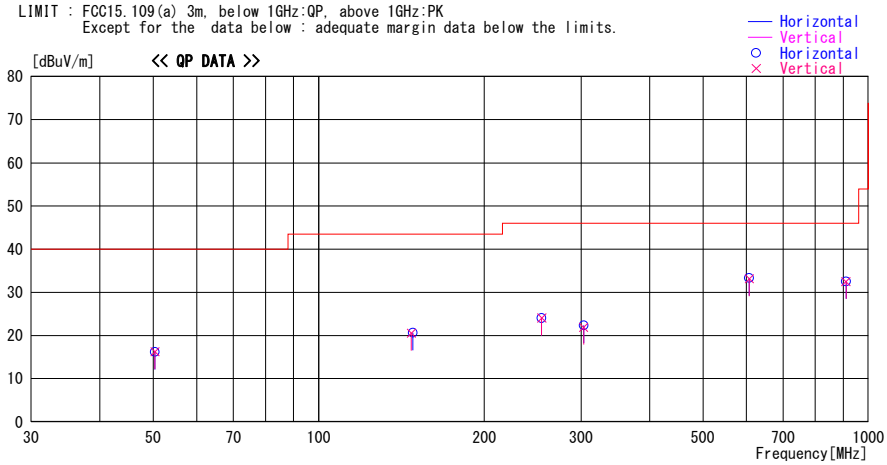
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
50.400	38.8	QP	10.7	-33.3	16.2	0	300	Hori.	40.0	23.8	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
147.415	37.7	QP	14.4	-31.6	20.5	0	100	Vert.	43.5	23.0	
148.497	37.7	QP	14.5	-31.6	20.6	0	300	Hori.	43.5	22.9	
254.548	37.1	QP	17.3	-30.4	24.0	0	300	Hori.	46.0	22.0	
254.548	37.1	QP	17.3	-30.4	24.0	0	100	Vert.	46.0	22.0	
303.450	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
303.450	37.5	QP	14.8	-30.0	22.3	0	100	Hori.	46.0	23.7	
606.900	41.2	QP	20.3	-28.2	33.3	205	139	Hori.	46.0	12.7	
606.900	41.0	QP	20.3	-28.2	33.1	201	100	Vert.	46.0	12.9	
910.350	36.1	QP	22.5	-26.1	32.5	0	100	Hori.	46.0	13.5	
910.350	36.1	QP	22.5	-26.1	32.5	0	100	Vert.	46.0	13.5	

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

Variation No. 3, Internal Antenna

DATA OF RADIATED EMISSION TEST

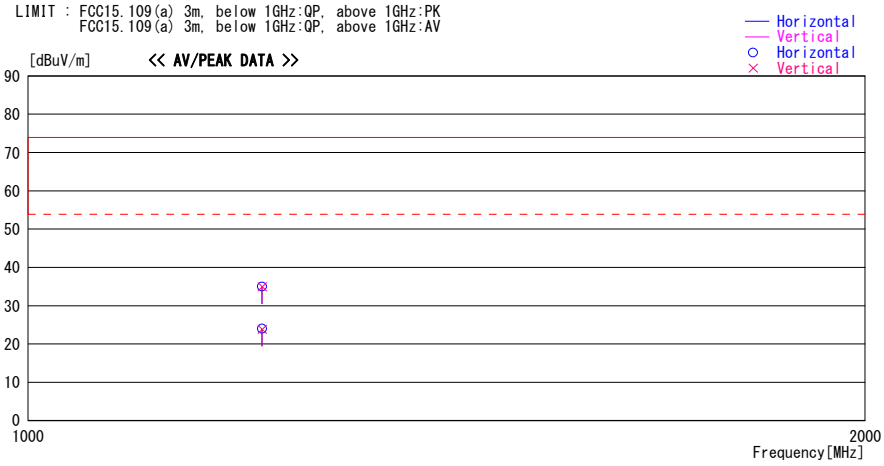
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
1213.800	34.6	AV	24.6	-35.2	24.0	359	100	Hori.	53.9	29.9	
1213.800	45.6	PK	24.6	-35.2	35.0	359	100	Vert.	73.9	38.9	
1213.800	34.5	AV	24.6	-35.2	23.9	359	100	Vert.	53.9	30.0	
1213.800	45.6	PK	24.6	-35.2	35.0	359	100	Hori.	73.9	38.9	

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

Variation No. 3, External Antenna

DATA OF RADIATED EMISSION TEST

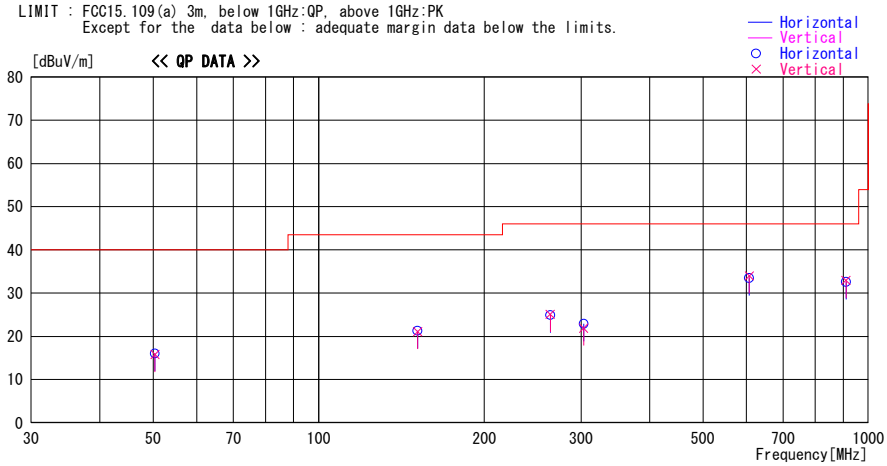
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : Keyless Receiving mode(314.35MHz) Ext Ant. Worst axis(Hori:**X**, Vert: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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
50.400	38.4	QP	10.7	-33.3	15.8	0	100	Vert.	40.0	24.2	
50.400	38.6	QP	10.7	-33.3	16.0	0	300	Hori.	40.0	24.0	
151.304	37.9	QP	14.7	-31.5	21.1	0	100	Vert.	43.5	22.4	
151.202	38.1	QP	14.7	-31.5	21.3	348	301	Hori.	43.5	22.2	
263.811	37.7	QP	17.8	-30.4	25.1	0	100	Vert.	46.0	20.9	
263.811	37.5	QP	17.8	-30.4	24.9	0	300	Hori.	46.0	21.1	
303.450	38.1	QP	14.8	-30.0	22.9	0	100	Hori.	46.0	23.1	
303.450	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
606.900	41.4	QP	20.3	-28.2	33.5	291	135	Hori.	46.0	12.6	
606.900	41.9	QP	20.3	-28.2	34.0	203	100	Vert.	46.0	12.0	
910.350	36.5	QP	22.5	-26.1	32.9	0	100	Vert.	46.0	13.1	
910.350	36.2	QP	22.5	-26.1	32.6	0	100	Hori.	46.0	13.4	

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.

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Facsimile : +81 596 24 8124

Radiated Emission

Variation No. 3, External Antenna

DATA OF RADIATED EMISSION TEST

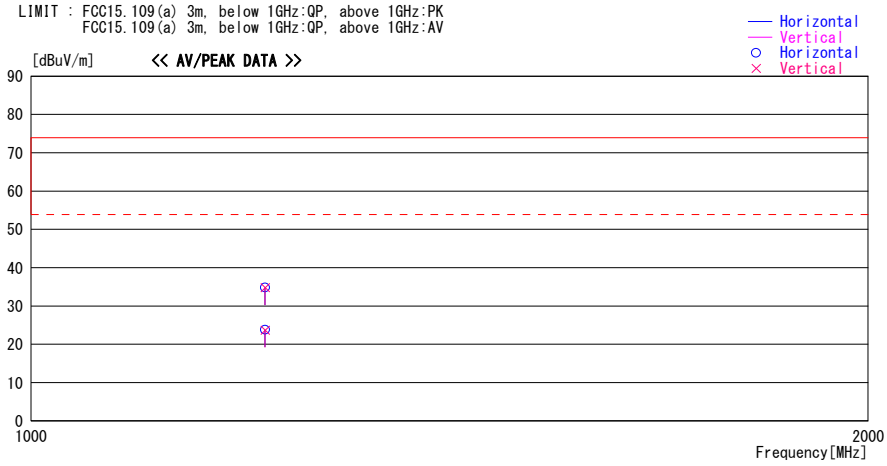
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : Keyless Receiving mode(314.35MHz) Ext Ant. Worst axis(Hori:X , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
1213.800	34.4	AV	24.6	-35.2	23.8	359	100	Hori.	53.9	30.1	
1213.800	45.4	PK	24.6	-35.2	34.8	359	100	Vert.	73.9	39.1	
1213.800	34.3	AV	24.6	-35.2	23.7	359	100	Vert.	53.9	30.2	
1213.800	45.4	PK	24.6	-35.2	34.8	359	100	Hori.	73.9	39.1	

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

Variation No. 3, Internal Antenna

DATA OF RADIATED EMISSION TEST

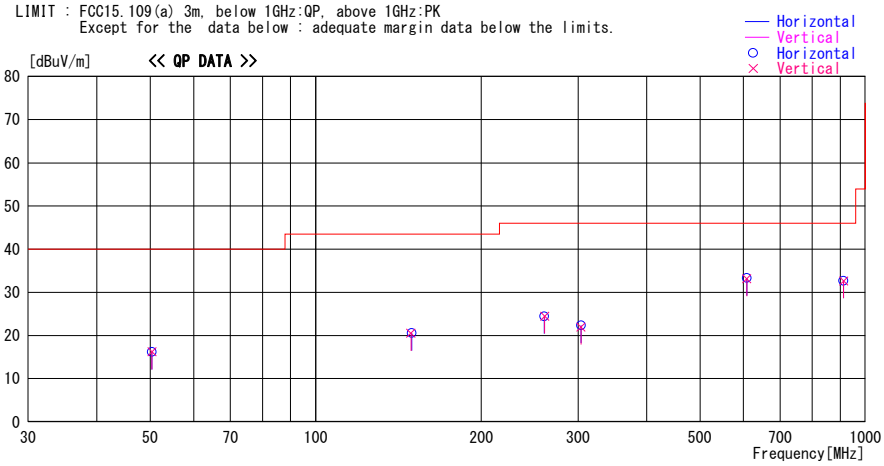
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert: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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
50.400	38.8	QP	10.7	-33.3	16.2	0	300	Hori.	40.0	23.8	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
149.038	37.6	QP	14.5	-31.6	20.5	0	100	Vert.	43.5	23.0	
149.579	37.5	QP	14.6	-31.6	20.5	0	300	Hori.	43.5	23.0	
260.500	37.2	QP	17.6	-30.4	24.4	0	300	Hori.	46.0	21.6	
261.041	37.2	QP	17.7	-30.4	24.5	0	100	Vert.	46.0	21.5	
304.080	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
304.080	37.5	QP	14.8	-30.0	22.3	0	100	Hori.	46.0	23.7	
608.160	41.0	QP	20.3	-28.2	33.1	205	100	Vert.	46.0	12.9	
608.160	41.2	QP	20.3	-28.2	33.3	205	140	Hori.	46.0	12.7	
912.240	36.1	QP	22.6	-26.0	32.7	0	100	Hori.	46.0	13.4	
912.240	36.0	QP	22.6	-26.0	32.6	0	100	Vert.	46.0	13.4	

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

Variation No. 3, Internal Antenna

DATA OF RADIATED EMISSION TEST

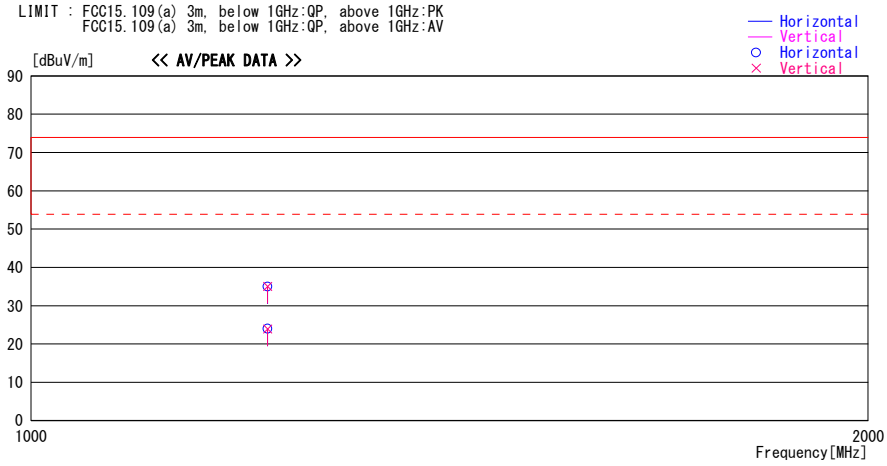
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
1216.320	34.6	AV	24.6	-35.2	24.0	359	100	Hori.	53.9	29.9	
1216.320	45.7	PK	24.6	-35.2	35.1	359	100	Vert.	73.9	38.8	
1216.320	34.6	AV	24.6	-35.2	24.0	359	100	Vert.	53.9	29.9	
1216.320	45.6	PK	24.6	-35.2	35.0	359	100	Hori.	73.9	38.9	

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

Variation No. 5, External Antenna

DATA OF RADIATED EMISSION TEST

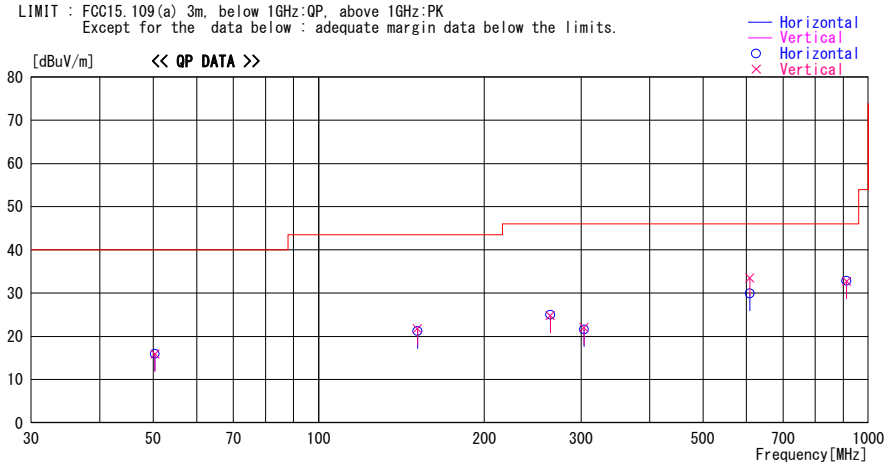
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : TPMS Receiving mode(314.98MHz) Ext Ant. Worst axis(Hori:**X** , Vert: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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
50.400	38.5	QP	10.7	-33.3	15.9	0	100	Vert.	40.0	24.1	
50.400	38.5	QP	10.7	-33.3	15.9	0	300	Hori.	40.0	24.1	
151.211	38.6	QP	14.7	-31.5	21.8	0	100	Vert.	43.5	21.7	
151.211	38.0	QP	14.7	-31.5	21.2	348	301	Hori.	43.5	22.3	
263.824	37.4	QP	17.8	-30.4	24.8	0	100	Vert.	46.0	21.2	
263.824	37.6	QP	17.8	-30.4	25.0	0	300	Hori.	46.0	21.0	
304.080	36.8	QP	14.8	-30.0	21.6	0	100	Hori.	46.0	24.4	
304.080	37.2	QP	14.8	-30.0	22.0	0	100	Vert.	46.0	24.0	
608.160	37.8	QP	20.3	-28.2	29.9	0	100	Hori.	46.0	16.1	
608.160	41.4	QP	20.3	-28.2	33.5	212	104	Vert.	46.0	12.5	
912.240	36.1	QP	22.6	-26.0	32.7	0	100	Vert.	46.0	13.3	
912.240	36.2	QP	22.6	-26.0	32.8	0	100	Hori.	46.0	13.2	

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.

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Facsimile : +81 596 24 8124

Radiated Emission

Variation No. 5, External Antenna

DATA OF RADIATED EMISSION TEST

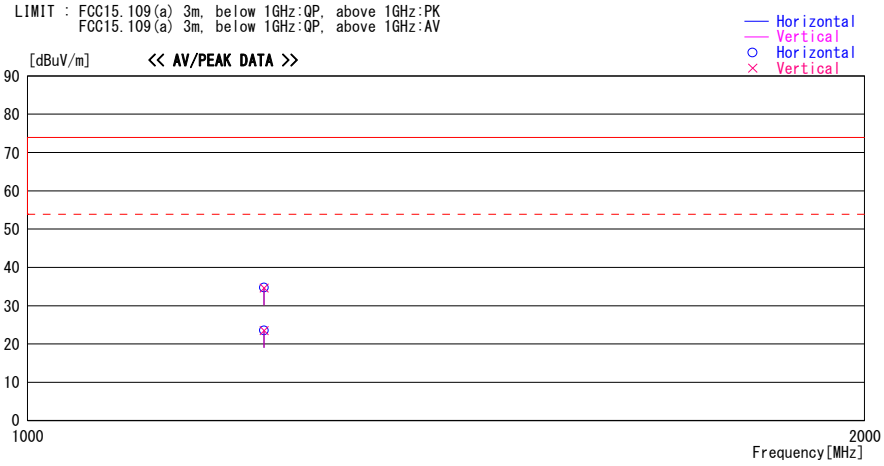
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : TPMS Receiving mode(314.98MHz) Ext Ant. Worst axis(Hori:**X** , Vert:X)

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
1216.320	34.2	AV	24.6	-35.2	23.6	359	100	Hori.	53.9	30.3	
1216.320	45.2	PK	24.6	-35.2	34.6	359	100	Vert.	73.9	39.3	
1216.320	34.1	AV	24.6	-35.2	23.5	359	100	Vert.	53.9	30.4	
1216.320	45.3	PK	24.6	-35.2	34.7	359	100	Hori.	73.9	39.2	

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.

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Radiated Emission

Variation No. 9, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

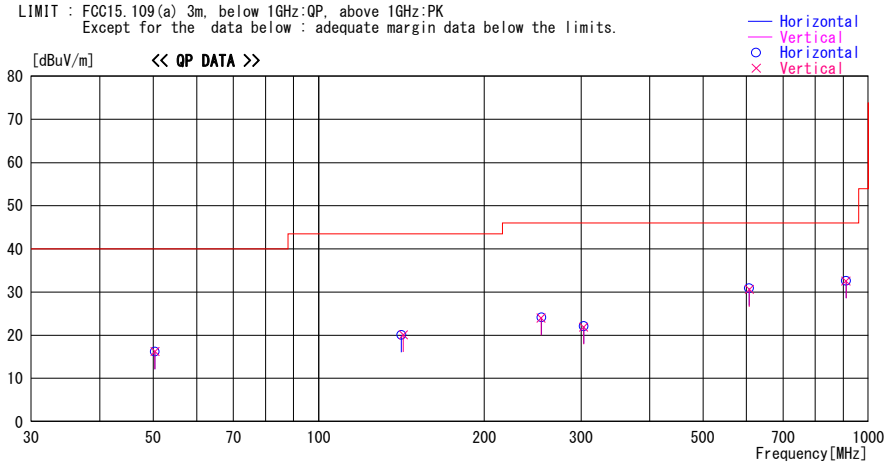
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:Z)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
50.400	38.8	QP	10.7	-33.3	16.2	0	300	Hori.	40.0	23.8	
141.463	37.8	QP	13.9	-31.6	20.1	0	300	Hori.	43.5	23.4	
142.545	37.7	QP	14.0	-31.6	20.1	0	100	Vert.	43.5	23.4	
254.007	37.1	QP	17.3	-30.4	24.0	0	100	Vert.	46.0	22.0	
254.548	37.2	QP	17.3	-30.4	24.1	0	300	Hori.	46.0	21.9	
303.450	37.3	QP	14.8	-30.0	22.1	3	100	Hori.	46.0	23.9	
303.450	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
606.900	38.5	QP	20.3	-28.2	30.6	159	100	Vert.	46.0	15.4	
606.900	38.7	QP	20.3	-28.2	30.8	212	144	Hori.	46.0	15.2	
910.350	36.2	QP	22.5	-26.1	32.6	0	100	Hori.	46.0	13.4	
910.350	36.2	QP	22.5	-26.1	32.6	0	100	Vert.	46.0	13.4	

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

Variation No. 9, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

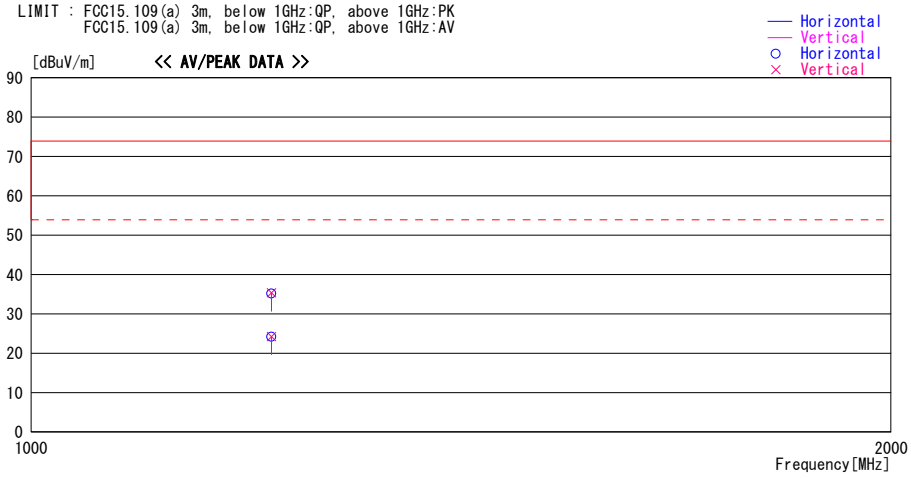
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:Z)

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
1213.800	34.8	AV	24.6	-35.2	24.2	359	100	Hori.	53.9	29.7	
1213.800	45.9	PK	24.6	-35.2	35.3	359	100	Vert.	73.9	38.6	
1213.800	34.8	AV	24.6	-35.2	24.2	359	100	Vert.	53.9	29.7	
1213.800	45.8	PK	24.6	-35.2	35.2	359	100	Hori.	73.9	38.7	

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

Variation No. 9, Internal Antenna

(Reference data)

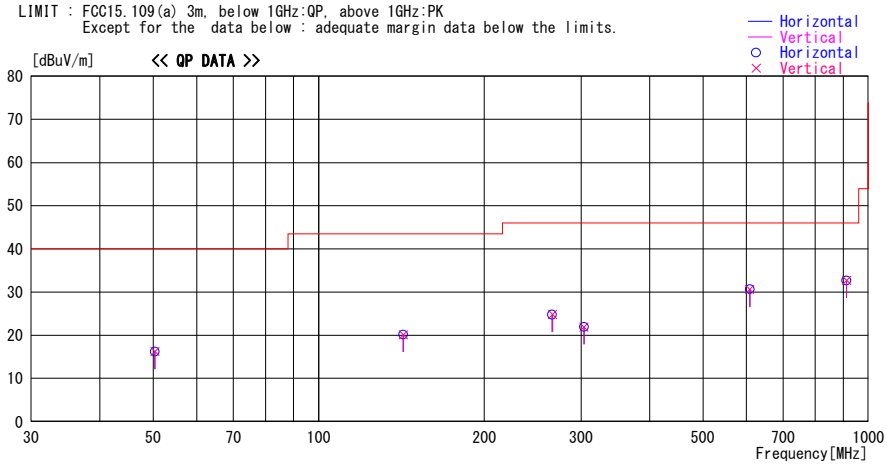
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01
Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert:Z)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
50.400	38.8	QP	10.7	-33.3	16.2	0	300	Hori.	40.0	23.8	
142.545	37.7	QP	14.0	-31.6	20.1	0	300	Hori.	43.5	23.4	
142.545	37.7	QP	14.0	-31.6	20.1	0	100	Vert.	43.5	23.4	
265.911	37.2	QP	17.9	-30.3	24.8	0	300	Hori.	46.0	21.2	
266.452	37.2	QP	17.9	-30.3	24.8	0	100	Vert.	46.0	21.2	
304.080	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
304.080	37.1	QP	14.8	-30.0	21.9	0	100	Hori.	46.0	24.1	
608.160	38.5	QP	20.3	-28.2	30.6	160	100	Vert.	46.0	15.4	
608.160	38.6	QP	20.3	-28.2	30.7	208	125	Hori.	46.0	15.3	
912.240	36.1	QP	22.6	-26.0	32.7	0	100	Vert.	46.0	13.3	
912.240	36.0	QP	22.6	-26.0	32.6	0	100	Hori.	46.0	13.4	

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

Variation No. 9, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

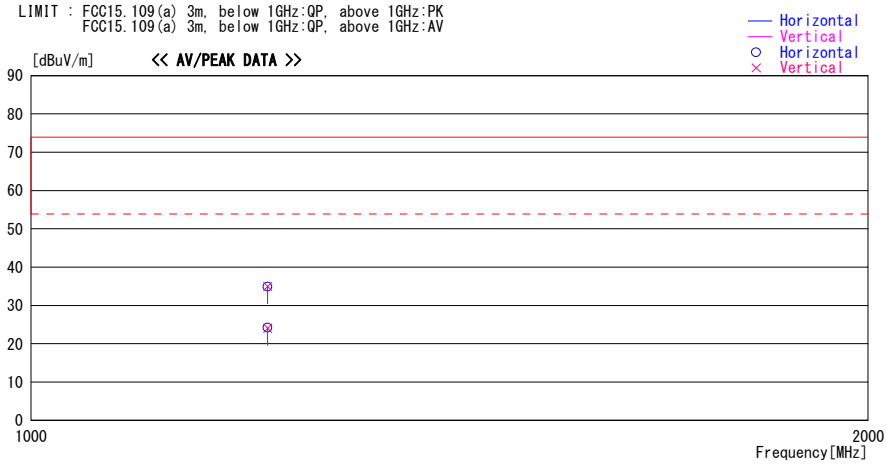
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert:Z)

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
1216.320	34.8	AV	24.6	-35.2	24.2	359	100	Hori.	53.9	29.7	
1216.320	45.6	PK	24.6	-35.2	35.0	359	100	Vert.	73.9	38.9	
1216.320	34.7	AV	24.6	-35.2	24.1	359	100	Vert.	53.9	29.8	
1216.320	45.5	PK	24.6	-35.2	34.9	359	100	Hori.	73.9	39.0	

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

Variation No. 15, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

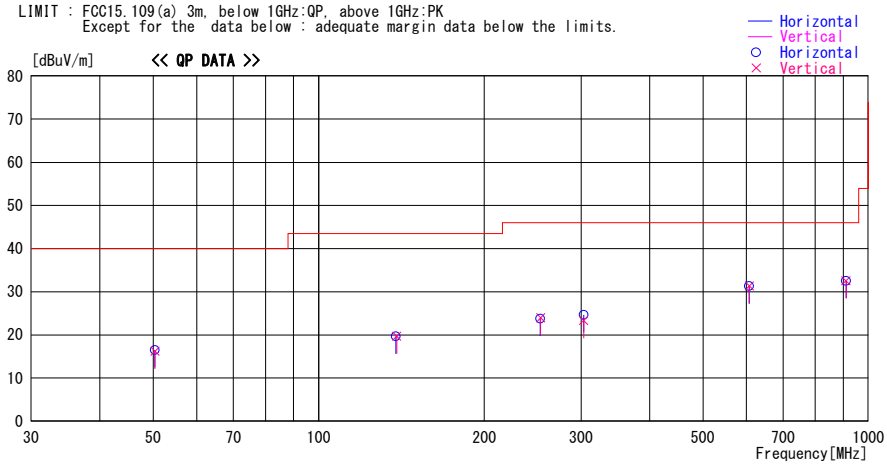
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
50.400	39.1	QP	10.7	-33.3	16.5	0	116	Hori.	40.0	23.5	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
138.217	37.9	QP	13.6	-31.8	19.7	0	300	Hori.	43.5	23.8	
138.758	37.8	QP	13.7	-31.8	19.7	0	100	Vert.	43.5	23.8	
252.925	37.1	QP	17.2	-30.5	23.8	0	300	Hori.	46.0	22.2	
253.466	37.1	QP	17.3	-30.4	24.0	0	100	Vert.	46.0	22.0	
303.450	39.9	QP	14.8	-30.0	24.7	337	100	Hori.	46.0	21.4	
303.450	38.5	QP	14.8	-30.0	23.3	199	100	Vert.	46.0	22.7	
606.900	39.2	QP	20.3	-28.2	31.3	191	100	Vert.	46.0	14.7	
606.900	39.2	QP	20.3	-28.2	31.3	204	132	Hori.	46.0	14.7	
910.350	36.1	QP	22.5	-26.1	32.5	0	100	Hori.	46.0	13.5	
910.350	36.1	QP	22.5	-26.1	32.5	0	100	Vert.	46.0	13.5	

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

Variation No. 15, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

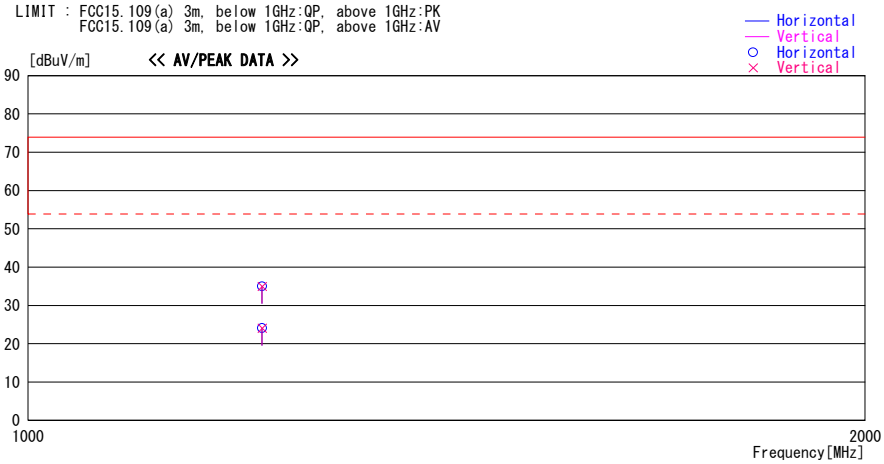
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
1213.800	34.7	AV	24.6	-35.2	24.1	359	100	Hori.	53.9	29.8	
1213.800	45.6	PK	24.6	-35.2	35.0	359	100	Vert.	73.9	38.9	
1213.800	34.7	AV	24.6	-35.2	24.1	359	100	Vert.	53.9	29.8	
1213.800	45.6	PK	24.6	-35.2	35.0	359	100	Hori.	73.9	38.9	

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

Variation No. 15, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

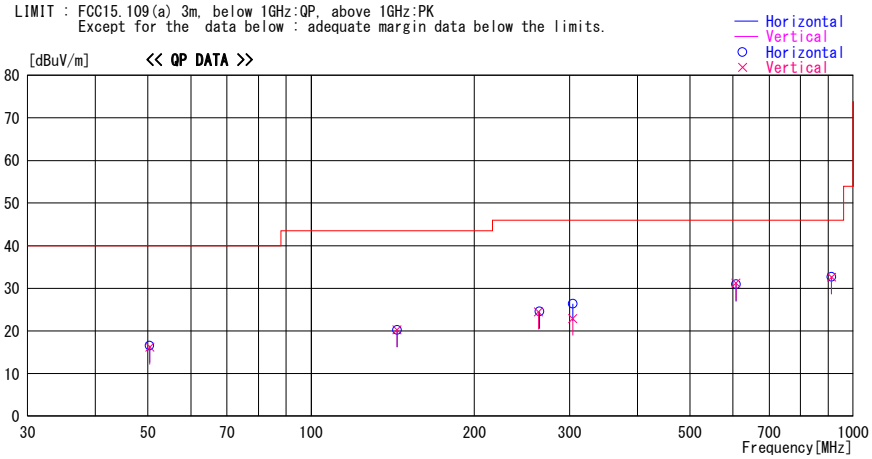
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert: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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
50.400	39.2	QP	10.7	-33.3	16.6	0	117	Hori.	40.0	23.4	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
144.168	37.8	QP	14.1	-31.6	20.3	0	300	Hori.	43.5	23.3	
144.168	37.8	QP	14.1	-31.6	20.3	0	100	Vert.	43.5	23.2	
262.664	37.1	QP	17.7	-30.4	24.4	0	100	Vert.	46.0	21.6	
263.746	37.2	QP	17.8	-30.4	24.6	0	300	Hori.	46.0	21.4	
304.080	41.6	QP	14.8	-30.0	26.4	319	113	Hori.	46.0	19.7	
304.080	38.1	QP	14.8	-30.0	22.9	325	100	Vert.	46.0	23.1	
608.160	38.9	QP	20.3	-28.2	31.0	215	133	Hori.	46.0	15.0	
608.160	39.1	QP	20.3	-28.2	31.2	187	100	Vert.	46.0	14.8	
912.240	36.1	QP	22.6	-26.0	32.7	0	100	Vert.	46.0	13.4	
912.240	36.1	QP	22.6	-26.0	32.7	0	100	Hori.	46.0	13.3	

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

Variation No. 15, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

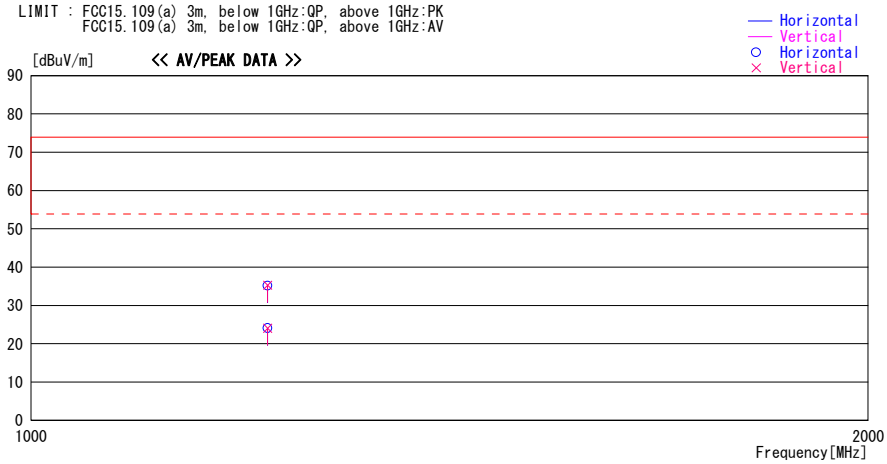
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
1216.320	34.7	AV	24.6	-35.2	24.1	359	100	Hori.	53.9	29.8	
1216.320	45.9	PK	24.6	-35.2	35.3	359	100	Vert.	73.9	38.6	
1216.320	34.7	AV	24.6	-35.2	24.1	359	100	Vert.	53.9	29.8	
1216.320	45.8	PK	24.6	-35.2	35.2	359	100	Hori.	73.9	38.7	

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

Variation No. 21, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

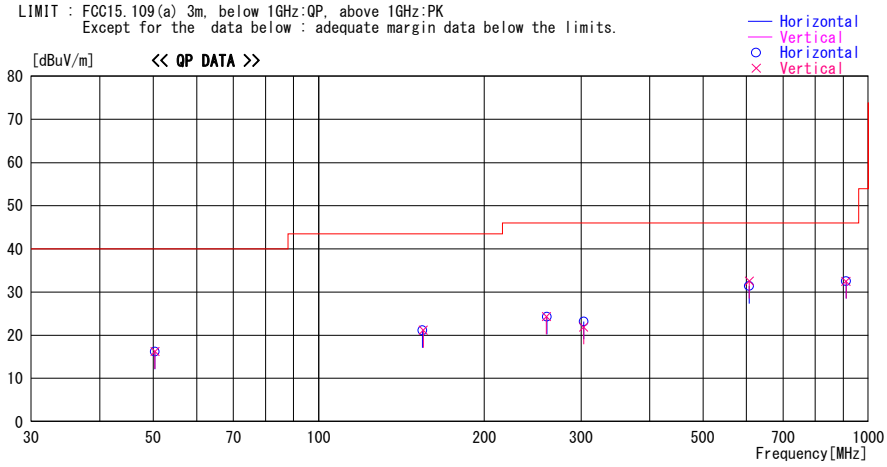
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
50.400	38.8	QP	10.7	-33.3	16.2	0	300	Hori.	40.0	23.8	
154.449	37.6	QP	15.0	-31.5	21.1	0	300	Hori.	43.5	22.4	
154.990	37.6	QP	15.0	-31.5	21.1	0	100	Vert.	43.5	22.4	
259.418	37.1	QP	17.6	-30.4	24.3	0	100	Vert.	46.0	21.7	
259.959	37.1	QP	17.6	-30.4	24.3	0	300	Hori.	46.0	21.7	
303.450	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
303.450	38.3	QP	14.8	-30.0	23.1	164	100	Hori.	46.0	22.9	
606.900	39.3	QP	20.3	-28.2	31.4	222	128	Hori.	46.0	14.6	
606.900	40.4	QP	20.3	-28.2	32.5	248	100	Vert.	46.0	13.5	
910.350	36.1	QP	22.5	-26.1	32.5	0	100	Vert.	46.0	13.5	
910.350	36.1	QP	22.5	-26.1	32.5	0	100	Hori.	46.0	13.5	

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

Variation No. 21, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

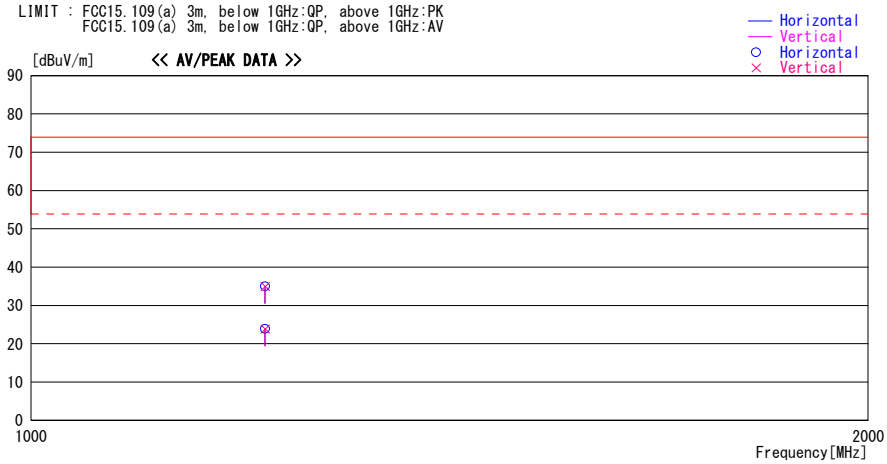
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
1213.800	34.5	AV	24.6	-35.2	23.9	359	100	Hori.	53.9	30.0	
1213.800	45.6	PK	24.6	-35.2	35.0	359	100	Vert.	73.9	38.9	
1213.800	34.5	AV	24.6	-35.2	23.9	359	100	Vert.	53.9	30.0	
1213.800	45.6	PK	24.6	-35.2	35.0	359	100	Hori.	73.9	38.9	

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

Variation No. 21, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

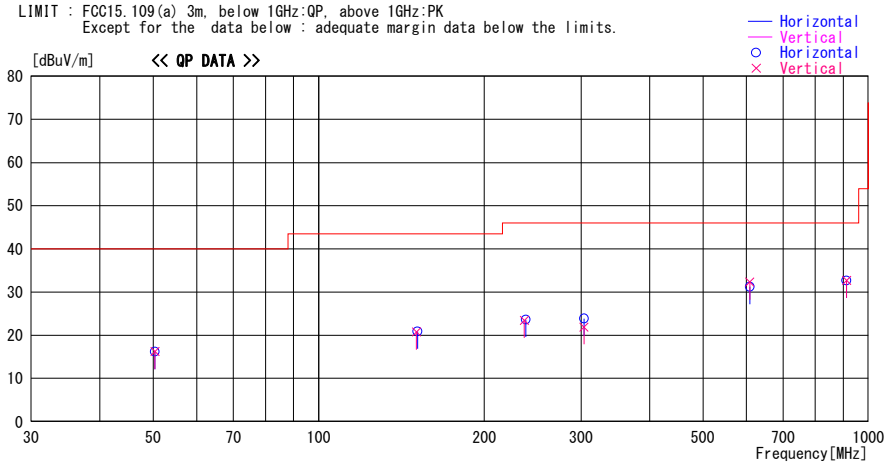
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
50.400	38.8	QP	10.7	-33.3	16.2	0	300	Hori.	40.0	23.8	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
150.661	37.6	QP	14.7	-31.6	20.7	0	100	Vert.	43.5	22.8	
151.202	37.7	QP	14.7	-31.5	20.9	0	300	Hori.	43.5	22.7	
236.692	37.1	QP	16.9	-30.6	23.4	0	100	Vert.	46.0	22.6	
238.316	37.2	QP	17.0	-30.6	23.6	0	300	Hori.	46.0	22.4	
304.080	39.0	QP	14.8	-30.0	23.8	175	108	Hori.	46.0	22.2	
304.080	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
608.160	39.1	QP	20.3	-28.2	31.2	206	129	Hori.	46.0	14.8	
608.160	40.2	QP	20.3	-28.2	32.3	206	100	Vert.	46.0	13.7	
912.240	36.1	QP	22.6	-26.0	32.7	0	100	Vert.	46.0	13.3	
912.240	36.1	QP	22.6	-26.0	32.7	215	100	Hori.	46.0	13.4	

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

Variation No. 21, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

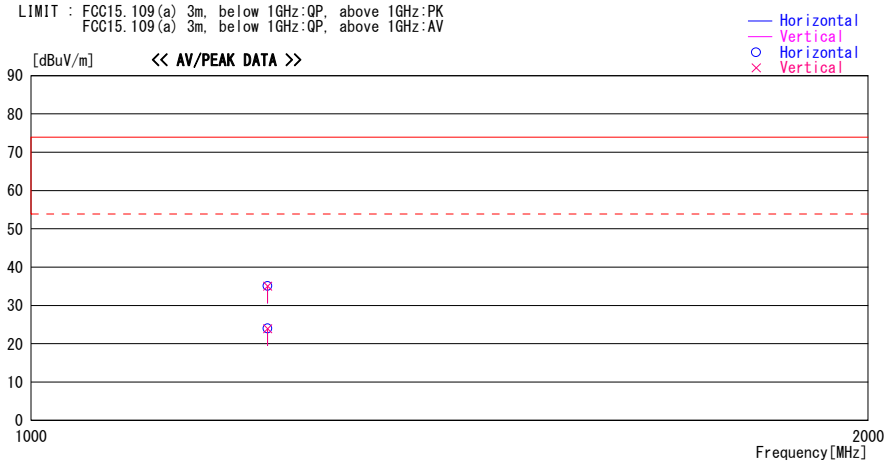
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
1216.320	34.6	AV	24.6	-35.2	24.0	359	100	Hori.	53.9	29.9	
1216.320	45.7	PK	24.6	-35.2	35.1	359	100	Vert.	73.9	38.8	
1216.320	34.6	AV	24.6	-35.2	24.0	359	100	Vert.	53.9	29.9	
1216.320	45.7	PK	24.6	-35.2	35.1	359	100	Hori.	73.9	38.8	

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

Variation No. 27, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

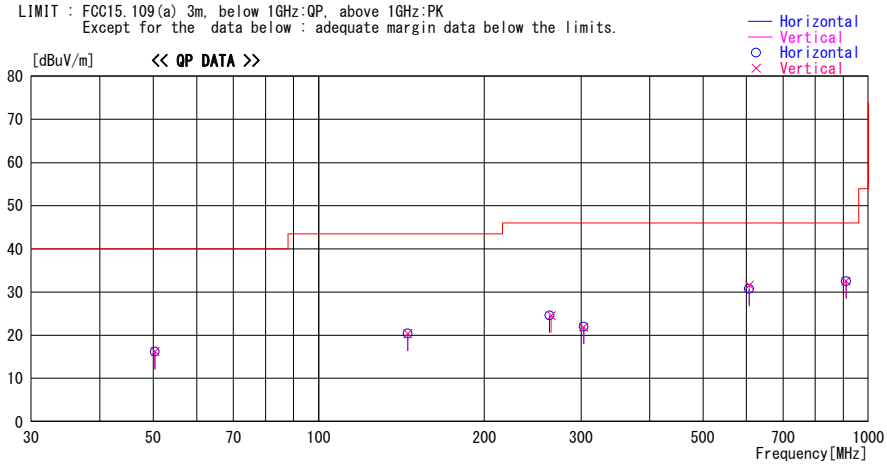
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
50.400	38.8	QP	10.7	-33.3	16.2	0	300	Hori.	40.0	23.8	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
145.251	37.8	QP	14.2	-31.6	20.4	0	300	Hori.	43.5	23.2	
145.251	37.8	QP	14.2	-31.6	20.4	0	100	Vert.	43.5	23.1	
263.205	37.2	QP	17.8	-30.4	24.6	0	300	Hori.	46.0	21.4	
264.828	37.2	QP	17.8	-30.4	24.6	0	100	Vert.	46.0	21.4	
303.450	37.2	QP	14.8	-30.0	22.0	0	100	Hori.	46.0	24.0	
303.450	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
606.900	38.6	QP	20.3	-28.2	30.7	210	135	Hori.	46.0	15.3	
606.900	39.4	QP	20.3	-28.2	31.5	198	100	Vert.	46.0	14.5	
910.350	36.1	QP	22.5	-26.1	32.5	0	100	Hori.	46.0	13.5	
910.350	36.1	QP	22.5	-26.1	32.5	0	100	Vert.	46.0	13.5	

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

Variation No. 27, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

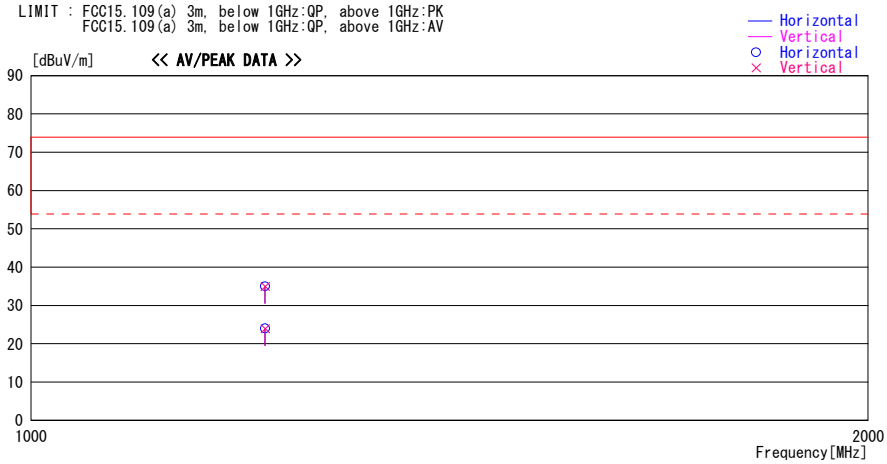
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : Keyless Receiving mode(314.35MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
1213.800	34.6	AV	24.6	-35.2	24.0	359	100	Hori.	53.9	29.9	
1213.800	45.6	PK	24.6	-35.2	35.0	359	100	Vert.	73.9	38.9	
1213.800	34.6	AV	24.6	-35.2	24.0	359	100	Vert.	53.9	29.9	
1213.800	45.6	PK	24.6	-35.2	35.0	359	100	Hori.	73.9	38.9	

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

Variation No. 27, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

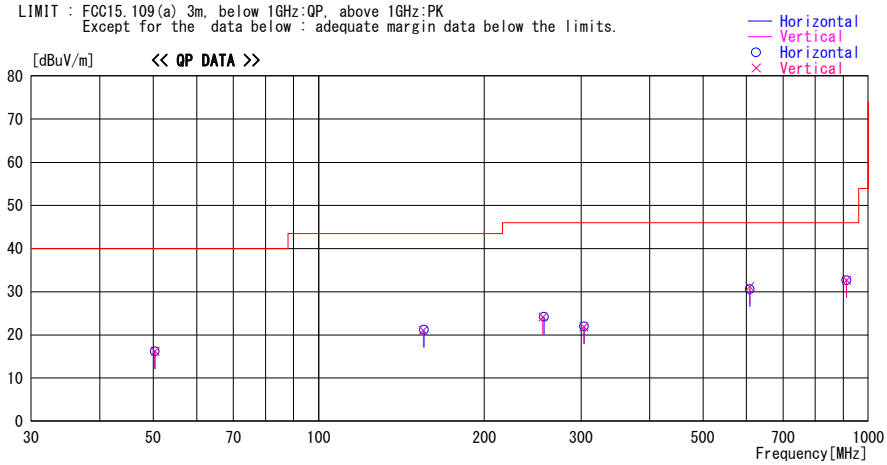
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/23

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Keisuke Kawamura

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
50.400	38.8	QP	10.7	-33.3	16.2	0	100	Vert.	40.0	23.8	
50.400	38.8	QP	10.7	-33.3	16.2	0	300	Hori.	40.0	23.8	
154.990	37.6	QP	15.0	-31.5	21.1	0	100	Vert.	43.5	22.4	
155.531	37.6	QP	15.1	-31.5	21.2	0	300	Hori.	43.5	22.3	
255.630	37.1	QP	17.4	-30.4	24.1	0	100	Vert.	46.0	21.9	
257.253	37.1	QP	17.5	-30.4	24.2	0	300	Hori.	46.0	21.8	
304.080	37.2	QP	14.8	-30.0	22.0	0	100	Hori.	46.0	24.0	
304.080	37.1	QP	14.8	-30.0	21.9	0	100	Vert.	46.0	24.1	
608.160	38.4	QP	20.3	-28.2	30.5	219	130	Hori.	46.0	15.5	
608.160	39.1	QP	20.3	-28.2	31.2	200	100	Vert.	46.0	14.9	
912.240	36.1	QP	22.6	-26.0	32.7	0	100	Hori.	46.0	13.3	
912.240	36.1	QP	22.6	-26.0	32.7	0	100	Vert.	46.0	13.3	

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

Variation No. 27, Internal Antenna

(Reference data)

DATA OF RADIATED EMISSION TEST

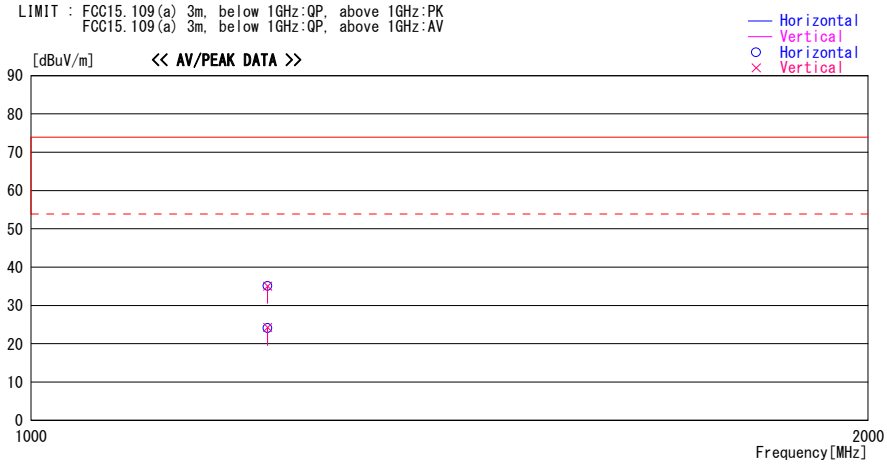
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2011/04/24

Report No. : 31GE0170-HO-01

Temp. / Humi. : 21deg. C/ 53% RH
Engineer : Hisayoshi Sato

Mode / Remarks : TPMS Receiving mode(314.98MHz) Int Ant. Worst axis(Hori:Z , Vert:X)

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
1216.320	34.7	AV	24.6	-35.2	24.1	359	100	Hori.	53.9	29.8	
1216.320	45.7	PK	24.6	-35.2	35.1	359	100	Vert.	73.9	38.8	
1216.320	34.8	AV	24.6	-35.2	24.2	359	100	Vert.	53.9	29.7	
1216.320	45.7	PK	24.6	-35.2	35.1	359	100	Hori.	73.9	38.8	

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.

Antenna Terminal Conducted Emission

Variation No. 3

DATA OF RADIATED EMISSION TEST

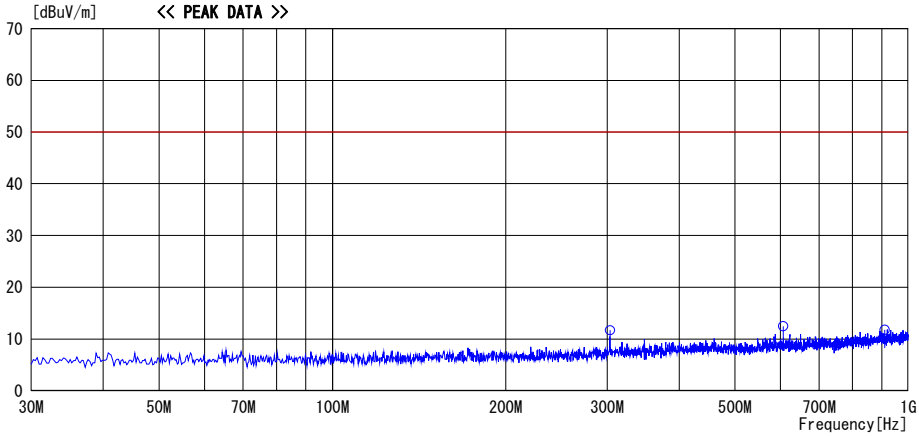
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2011/04/22

Report No. : 31GE0170-HO-01

Temp./Humi. : 27deg. C / 32% RH
Engineer : Motoya Imura

Mode / Remarks : Receiving mode(RKES:314.35MHz)

LIMIT : FCC15.111 Antenna terminal measurement
Except for the data below : adequate margin data below the limits.



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
303.450	30.3	PK	0.0	-18.6	11.7	0	100	Hori.	50.0	38.3
606.900	30.5	PK	0.0	-18.0	12.5	0	100	Hori.	50.0	37.5
910.350	27.9	PK	0.0	-16.1	11.8	0	100	Hori.	50.0	38.2

CHART:WITH FACTOR
CALCULATION:RESULT = READING + LOSS(CABLE) - 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.

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Antenna Terminal Conducted Emission

Variation No. 3

DATA OF RADIATED EMISSION TEST

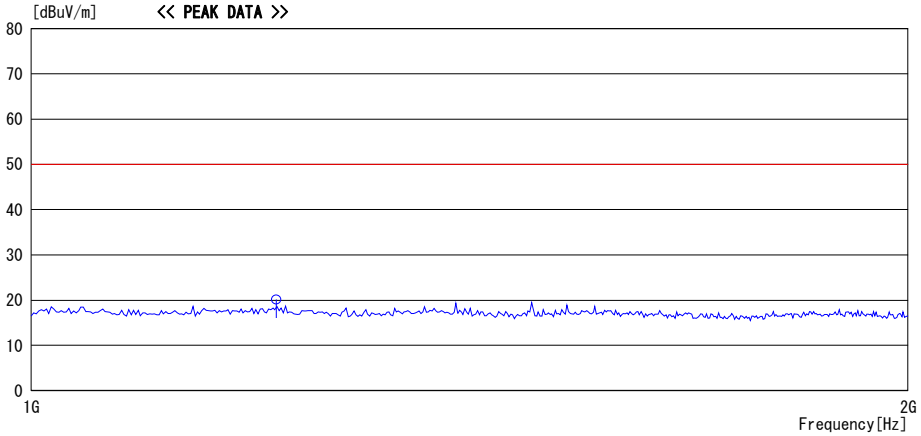
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2011/04/22

Report No. : 31GE0170-HO-01

Temp./Humi. : 27deg. C / 32% RH
Engineer : Motoya Imura

Mode / Remarks : Receiving mode(RKES:314.35MHz)

LIMIT : FCC15.111 Antenna terminal measurement
Except for the data below : adequate margin data below the limits.



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
1213.800	46.5	PK	0.0	-26.4	20.1	0	100	Hori.	50.0	29.9

CHART:WITH FACTOR
CALCULATION:RESULT = READING + LOSS(CABLE) - 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.

Antenna Terminal Conducted Emission

Variation No. 5

DATA OF RADIATED EMISSION TEST

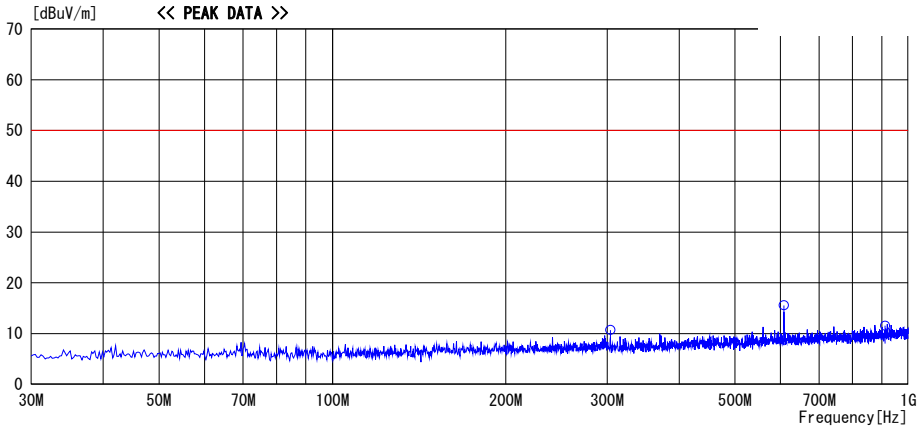
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2011/04/22

Report No. : 31GE0170-HO-01

Temp./Humi. : 27deg. C / 32% RH
Engineer : Motoya Imura

Mode / Remarks : Receiving mode(TPMS:314.98MHz)

LIMIT : FCC15.111 Antenna terminal measurement
Except for the data below : adequate margin data below the limits.



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
304.080	29.3	PK	0.0	-18.6	10.7	0	100	Hori.	50.0	39.3
608.160	33.6	PK	0.0	-18.0	15.6	0	100	Hori.	50.0	34.4
912.240	27.5	PK	0.0	-16.0	11.5	0	100	Hori.	50.0	38.5

CHART:WITH FACTOR
CALCULATION:RESULT = READING + LOSS(CABLE) - 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.

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Antenna Terminal Conducted Emission

Variation No. 5

DATA OF RADIATED EMISSION TEST

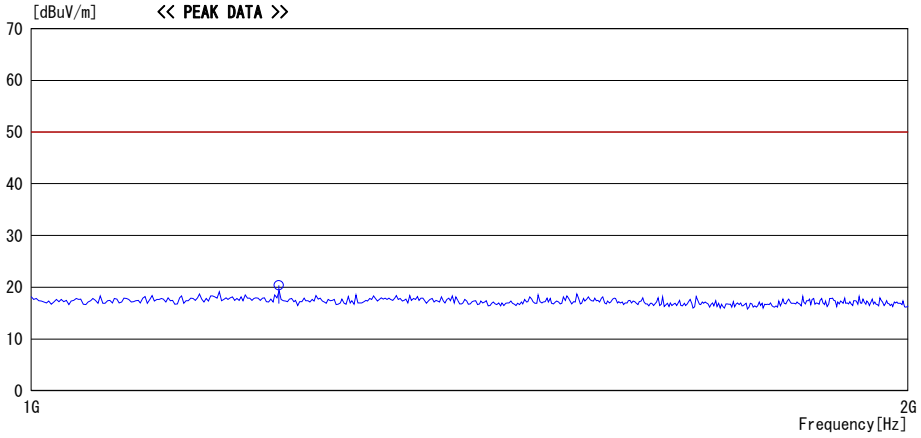
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2011/04/22

Report No. : 31GE0170-HO-01

Temp./Humi. : 27deg. C / 32% RH
Engineer : Motoya Imura

Mode / Remarks : Receiving mode(TPMS:314.98MHz)

LIMIT : FCC15.111 Antenna terminal measurement
Except for the data below : adequate margin data below the limits.



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
1216.320	46.8	PK	0.0	-26.4	20.4	0	100	Hori.	50.0	29.6

CHART:WITH FACTOR
CALCULATION:RESULT = READING + LOSS(CABLE) - 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	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-01	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	RE	2010/07/02 * 12
MOS-01	Digital Humidity Indicator	N.T	NT-1800	MOS01	RE	2011/02/23 * 12
MJM-01	Measure	KDS	ES19-55	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	100084	RE	2010/12/07 * 12
KBA-05	Biconical Antenna	Schwarzbeck	BBA9106	2513	RE	2010/10/15 * 12
KLA-04	Logperiodic Antenna	Schwarzbeck	USLP9143	361	RE	2010/10/16 * 12
MAT-08	Attenuator(6dB)	Weinschel Corp	2	BK7971	RE	2010/11/05 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/ TSJ	-	-	RE	2010/10/14 * 12
MPA-20	Pre Amplifier	Elena	EPA-4020YA	030801	RE	2011/03/27 * 12
MHA-05	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	253	RE	2010/06/29 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	148048-143(1m) / 292410(5m)	RE	2010/09/30 * 12
MPA-01	Pre Amplifier	Agilent	8449B	3008A01671	RE	2011/02/24 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE	2010/11/30 * 12
MCC-115	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290211/4	AT	2010/08/05 * 12
MMP-01	Matching Pad Anritsu	Anritsu	MB-009	40063	AT	2010/07/04 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	AT	2011/02/18 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	AT	2010/09/09 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	AT	2010/09/30 * 12
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	AT	-
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	AT	2011/02/23 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	100300	AT	2011/04/15 * 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
AT: Antenna Terminal Conducted emission