

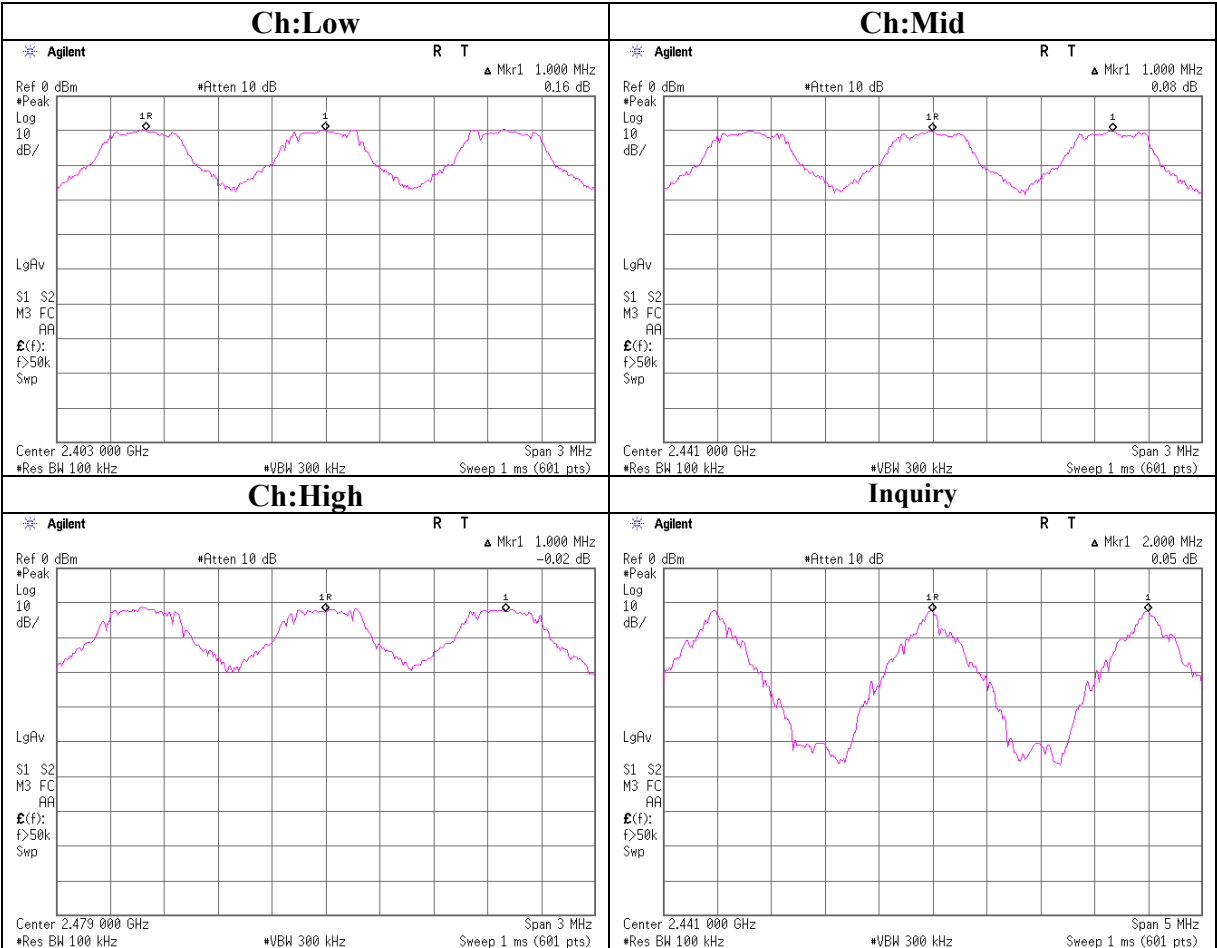
APPENDIX 2: Data of EMI test

Carrier Frequency Separation

Company	DENSO CORPORATION	UL Japan, Inc.
Equipment	Navigation ECU	Head Office EMC Lab. No.6 shielded room
Model	DNNS025	Regulation FCC15.247(a)(1) / RSS-210 A8.1(2)
S/N	12	Test Distance -
Power	DC12V	Date 09/26/2007
Mode	Bluetooth Tx Hopping On / Inquiry	Temperature 25 deg.C.
		Humidity 63 %
		Engineer Tomotaka Sasagawa

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.000	0.620 [MHz] (two-thirds of 20dB Bandwidth (0.930 [MHz])) or 25[kHz] (whichever is greater)
Mid	2441.0	1.000	0.583 [MHz] (two-thirds of 20dB Bandwidth (0.875 [MHz])) or 25[kHz] (whichever is greater)
High	2480.0	1.000	0.583 [MHz] (two-thirds of 20dB Bandwidth (0.875 [MHz])) or 25[kHz] (whichever is greater)
Inquiry	2441.0	2.000	0.519 [MHz] (two-thirds of 20dB Bandwidth (0.779 [MHz])) or 25[kHz] (whichever is greater)

Carrier Frequency Separation



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Issued date : January 11, 2008
Revised date : February 4, 2008
FCC ID : HYQDNNS025

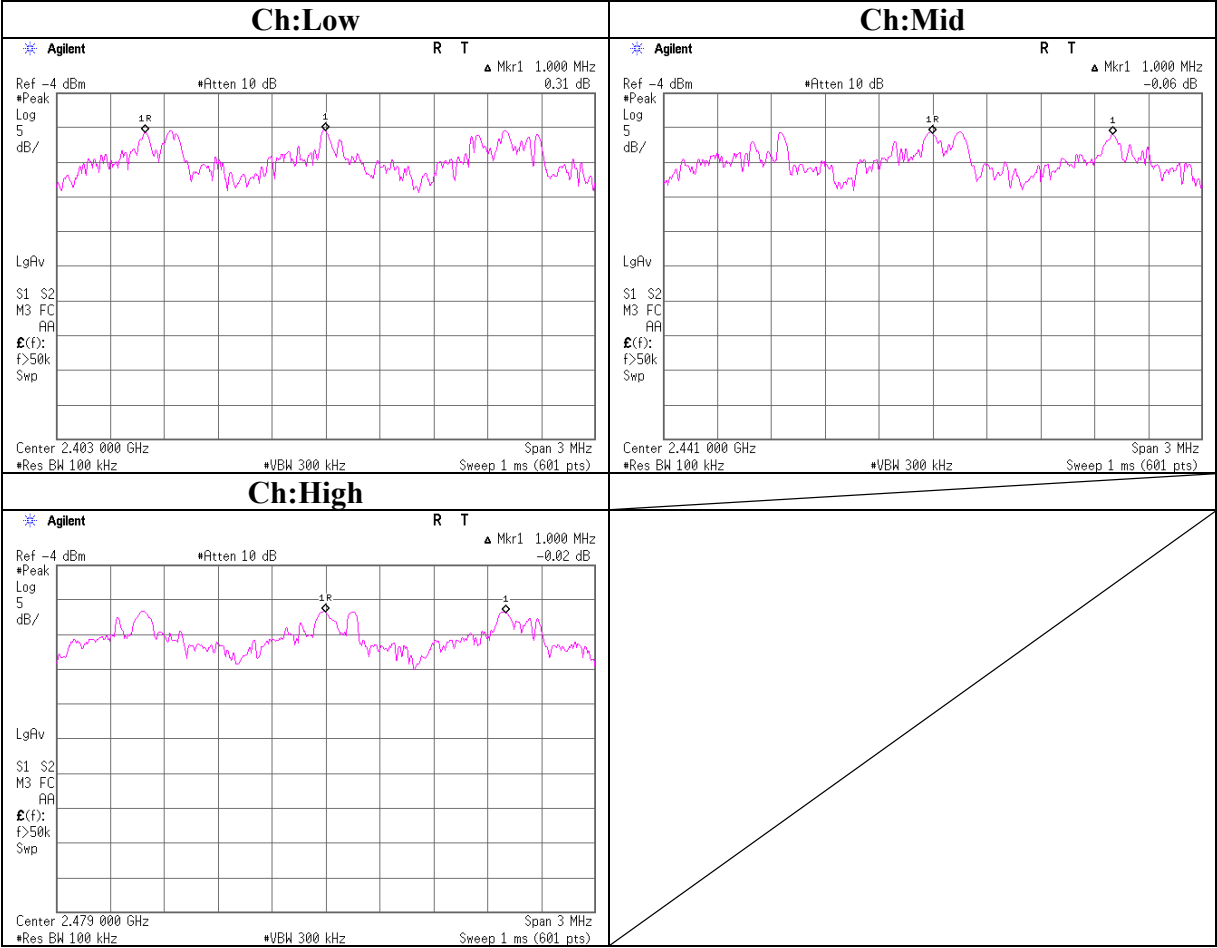
Carrier Frequency Separation (EDR)

Company	DENSO CORPORATION	UL Japan, Inc.
Equipment	Navigation ECU	Head Office EMC Lab. No.6 shielded room
Model	DNNS025	Regulation FCC15.247(a)(1) / RSS-210 A8.1(2)
S/N	12	Test Distance -
Power	DC12V	Date 09/26/2007
Mode	Bluetooth Tx Hopping On	Temperature 25 deg.C.
		Humidity 63 %
		Engineer Tomotaka Sasagawa

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.000	0.867 [MHz] (two-thirds of 20dB Bandwidth (1.300 [MHz])) or 25[kHz] (whichever is greater)
Mid	2441.0	1.000	0.847 [MHz] (two-thirds of 20dB Bandwidth (1.270 [MHz])) or 25[kHz] (whichever is greater)
High	2480.0	1.000	0.847 [MHz] (two-thirds of 20dB Bandwidth (1.270 [MHz])) or 25[kHz] (whichever is greater)

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Carrier Frequency Separation (EDR)

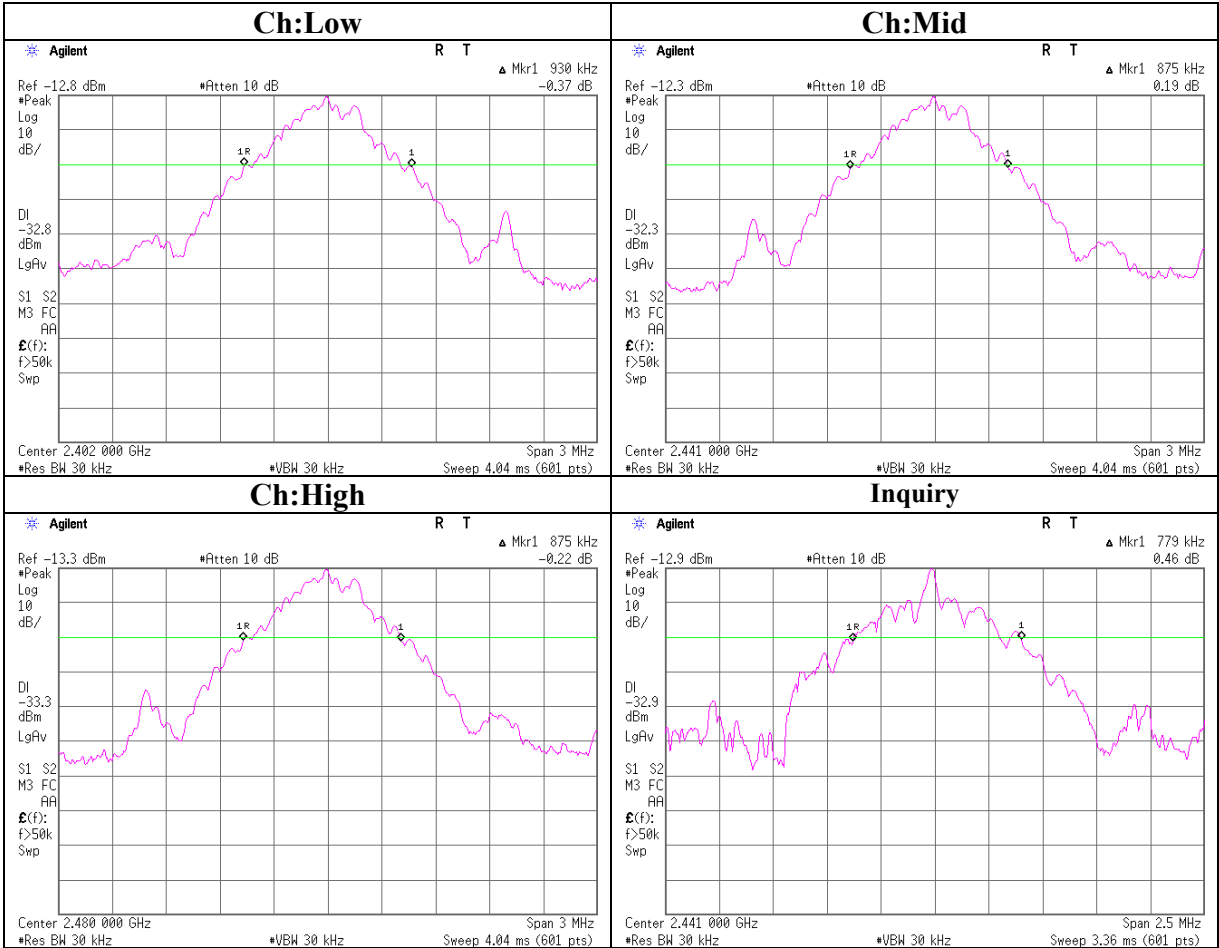


20dB Bandwidth

Company	DENSO CORPORATION	UL Japan, Inc.	
Equipment	Navigation ECU	Head Office EMC Lab. No.6 Shielded room	
Model	DNNS025	Regulation	FCC15.247(a)(1) / RSS-210 A8.1(1)
S/N	12	Test Distance	-
Power	DC12V	Date	09/26/2007
Mode	Bluetooth Tx Hopping Off / Inquiry	Temperature	25 deg.C.
		Humidity	63 %
		Engineer	Tomotaka Sasagawa

Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	2402.0	0.930	-
Mid	2441.0	0.875	-
High	2480.0	0.875	-
Inquiry	2441.0	0.779	-

20dB Bandwidth



Test report No. : 28AE0322-HO-A-R1
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Issued date : January 11, 2008
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FCC ID : HYQDNNS025

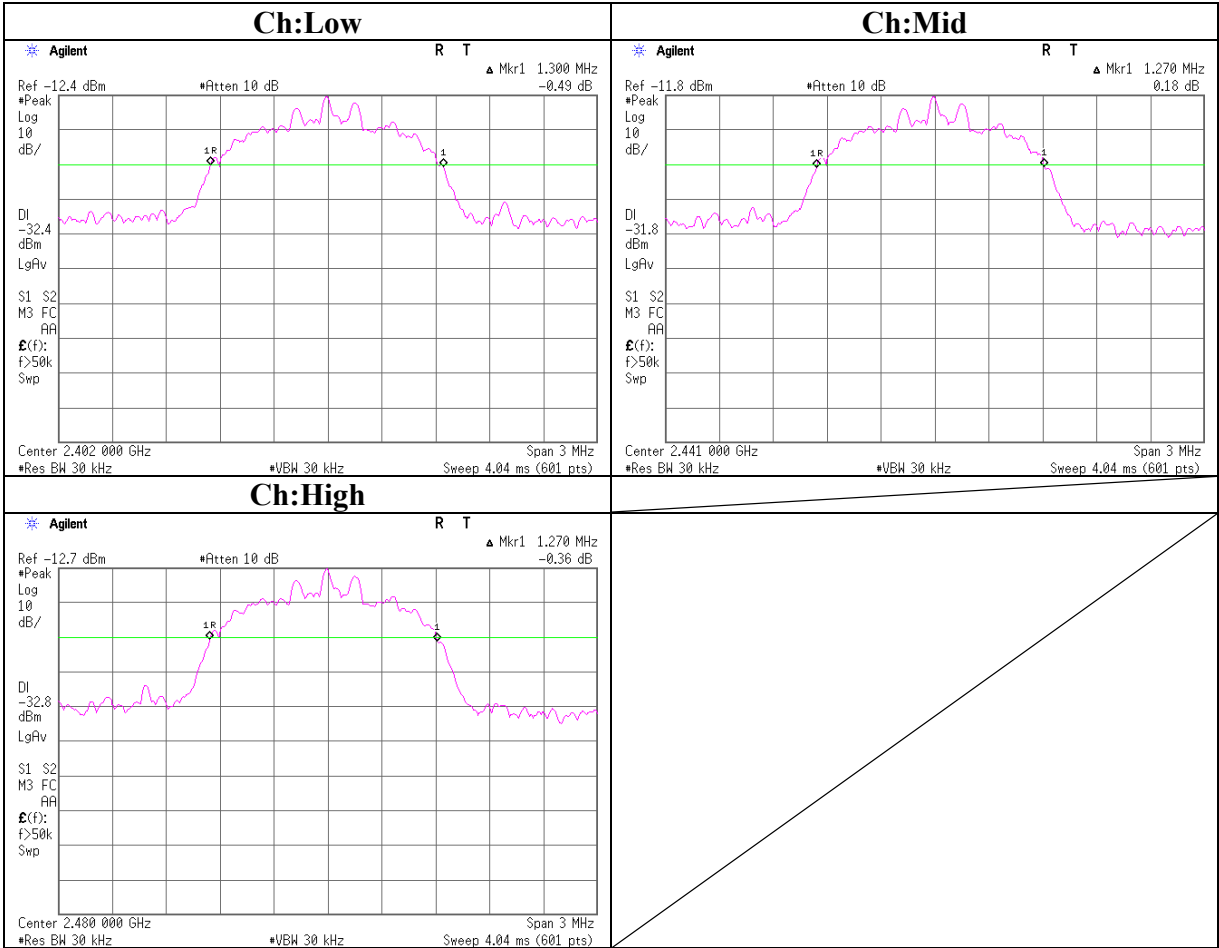
20dB Bandwidth (EDR)

Company	DENSO CORPORATION	UL Japan, Inc.	
Equipment	Navigation ECU	Head Office EMC Lab. No.6 Shielded room	
Model	DNNS025	Regulation	FCC15.247(a)(1) / RSS-210 A8.1(1)
S/N	12	Test Distance	-
Power	DC12V	Date	09/26/2007
Mode	Bluetooth Tx Hopping Off	Temperature	25 deg.C.
		Humidity	63 %
		Engineer	Tomotaka Sasagawa

Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	2402.0	1.300	-
Mid	2441.0	1.270	-
High	2480.0	1.270	-

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20dB Bandwidth (EDR)



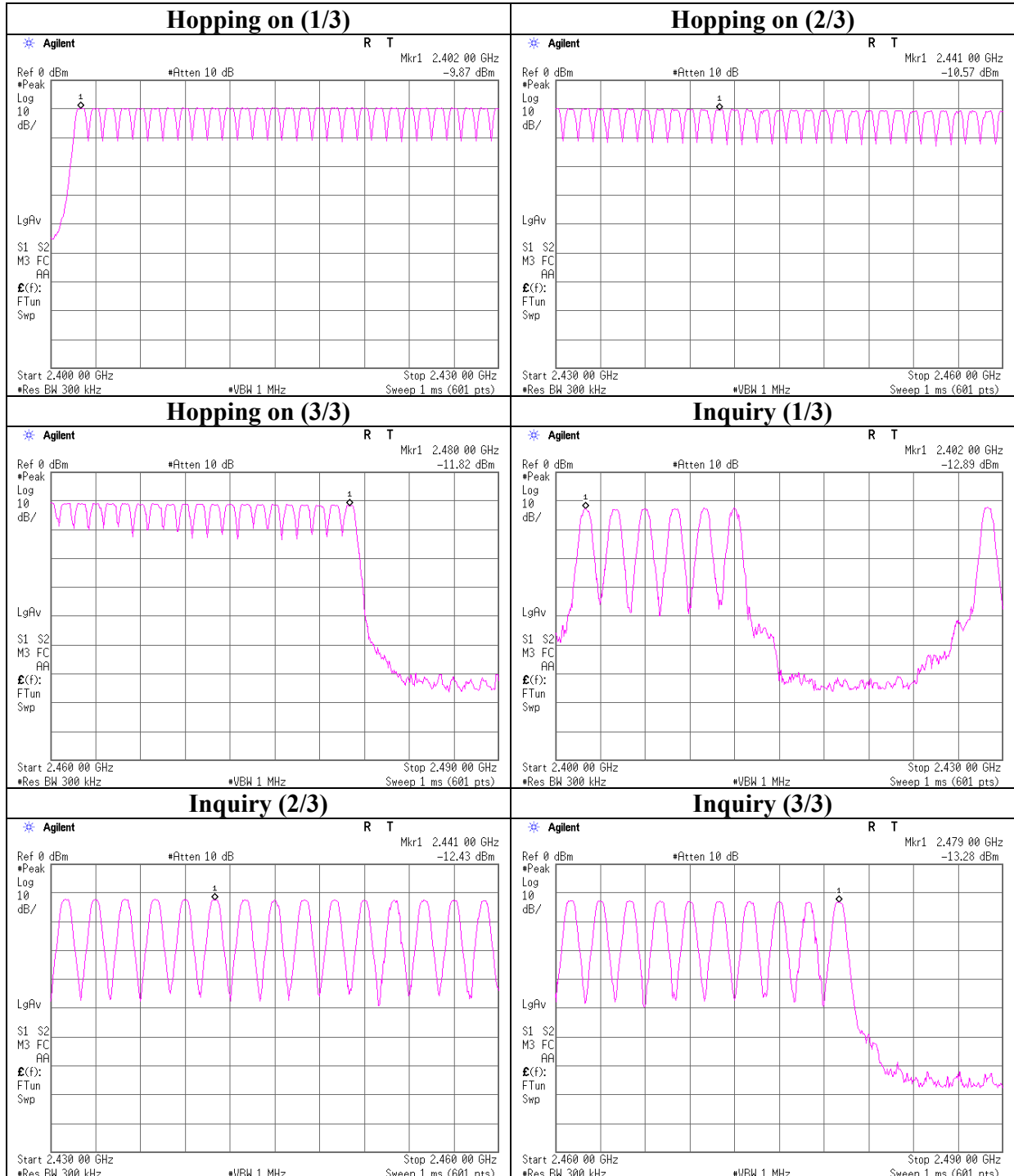
Number of Hopping Frequency

Company	DENSO CORPORATION	UL Japan, Inc.
Equipment	Navigation ECU	Head Office EMC Lab. No.6 Shielded room
Model	DNNS025	Regulation FCC15.247(a)(1)(iii) / RSS-210 A8.1(4)
S/N	12	Test Distance -
Power	DC12V	Date 09/26/2007
Mode	Bluetooth Tx Hopping On / Inquiry	Temperature 25 deg.C.
		Humidity 63 %
		Engineer Tomotaka Sasagawa

Mode	Number of channel	Limit
	[time]	[time]
Tx(Hopping on)	79	≥ 15

Mode	Number of channel	Limit
	[time]	[time]
Inquiry	32	≥ 15

Number of Hopping Frequency



Test report No. : 28AE0322-HO-A-R1
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Issued date : January 11, 2008
Revised date : February 4, 2008
FCC ID : HYQDNNS025

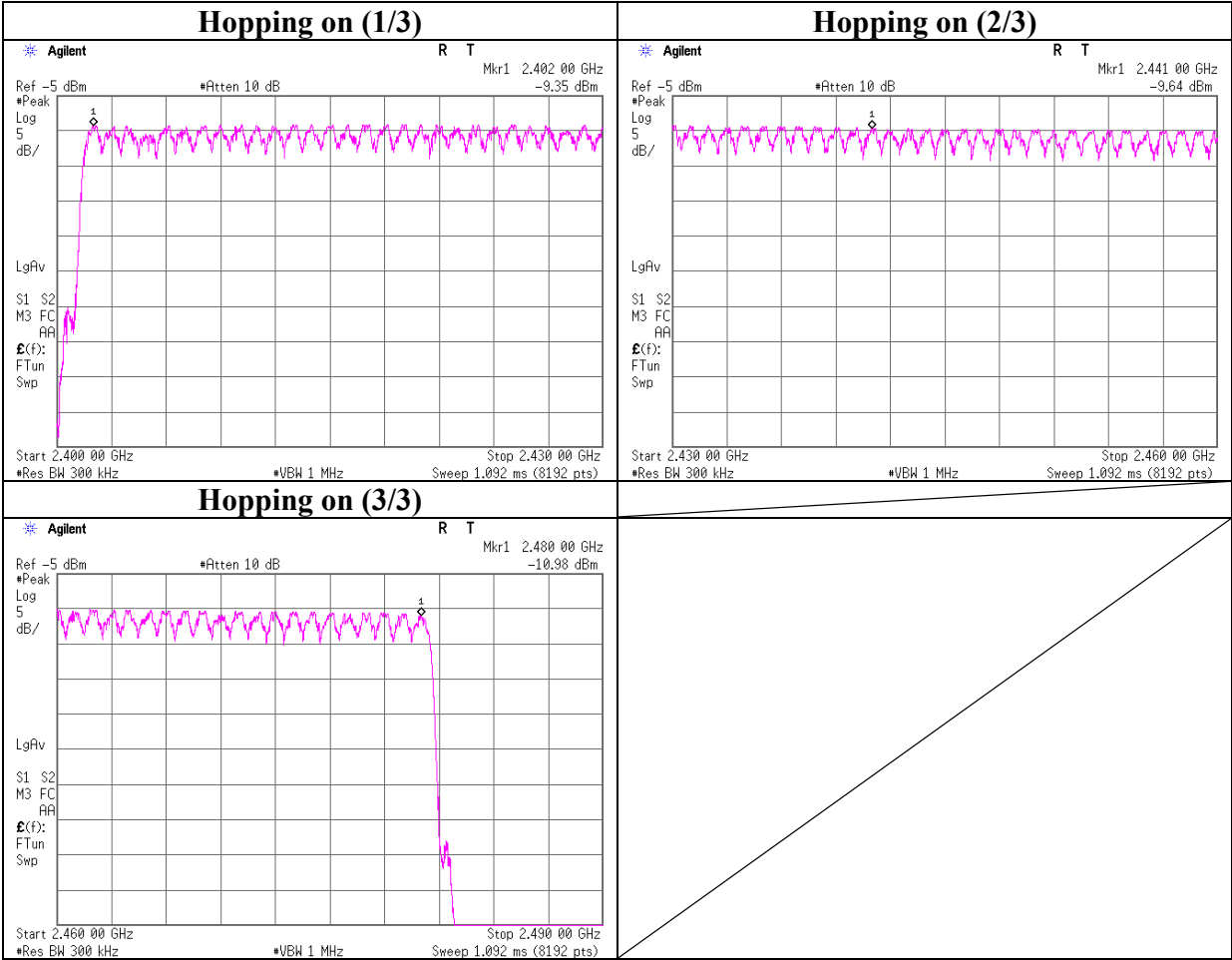
Number of Hopping Frequency (EDR)

Company	DENSO CORPORATION	UL Japan, Inc.
Equipment	Navigation ECU	Head Office EMC Lab. No.6 Shielded room
Model	DNNS025	Regulation FCC15.247(a)(1)(iii) / RSS-210 A8.1(4)
S/N	12	Test Distance -
Power	DC12V	Date 09/26/2007
Mode	Bluetooth Tx Hopping On	Temperature 25 deg.C.
		Humidity 63 %
		Engineer Tomotaka Sasagawa

Mode	Number of channel	Limit
	[time]	[time]
Tx(Hopping on)	79	≥ 15

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Number of Hopping Frequency (EDR)

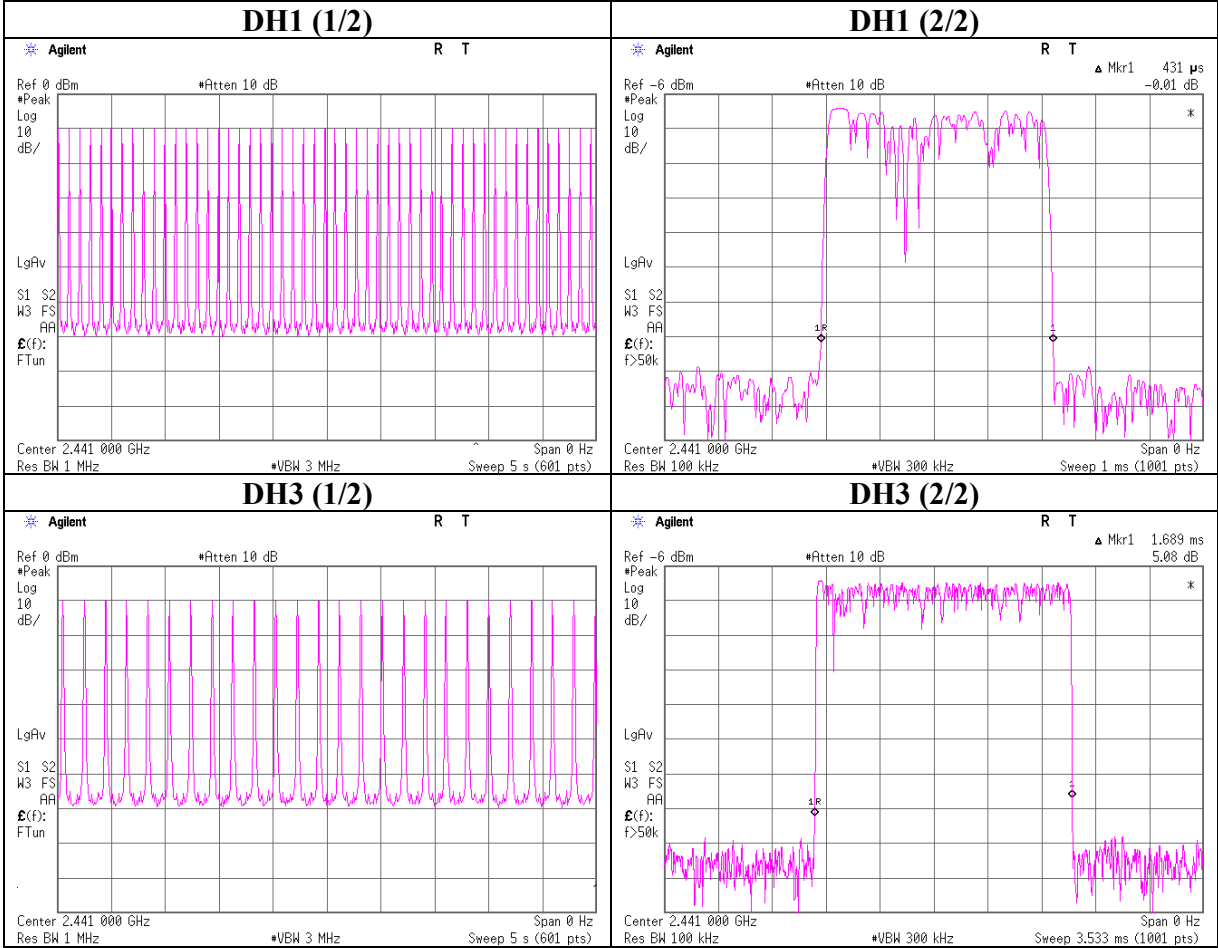


Dwell time

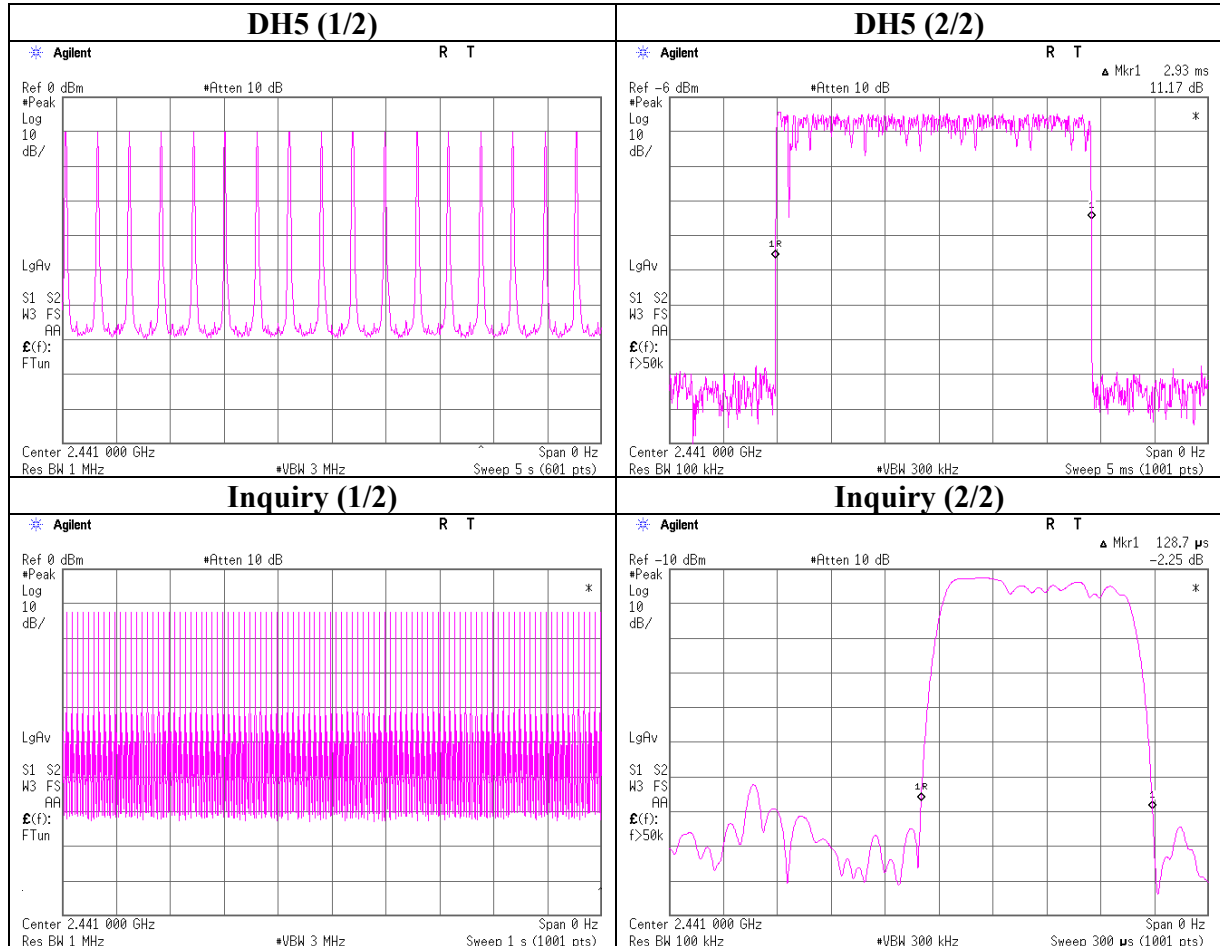
Company	DENSO CORPORATION	UL Japan, Inc.
Equipment	Navigation ECU	Head Office EMC Lab. No.6 Shielded room
Model	DNNS025	Regulation FCC15.247(a)(1)(iii) / RSS-210 A8.1(4)
S/N	12	Test Distance -
Power	DC12V	Date 09/26/2007
Mode	Bluetooth Tx Hopping On / Inquiry	Temperature 25 deg.C.
		Humidity 63 %
		Engineer Tomotaka Sasagawa

Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	51 times / 5 sec. x 31.6 sec. = 323 times	0.431	139	400
DH3	26 times / 5 sec. x 31.6 sec. = 165 times	1.689	279	400
DH5	17 times / 5 sec. x 31.6 sec. = 108 times	2.930	316	400
Inquiry	100 times / 1 sec. x 12.8 sec. = 1280 times	0.129	165	400

Dwell time



Dwell time

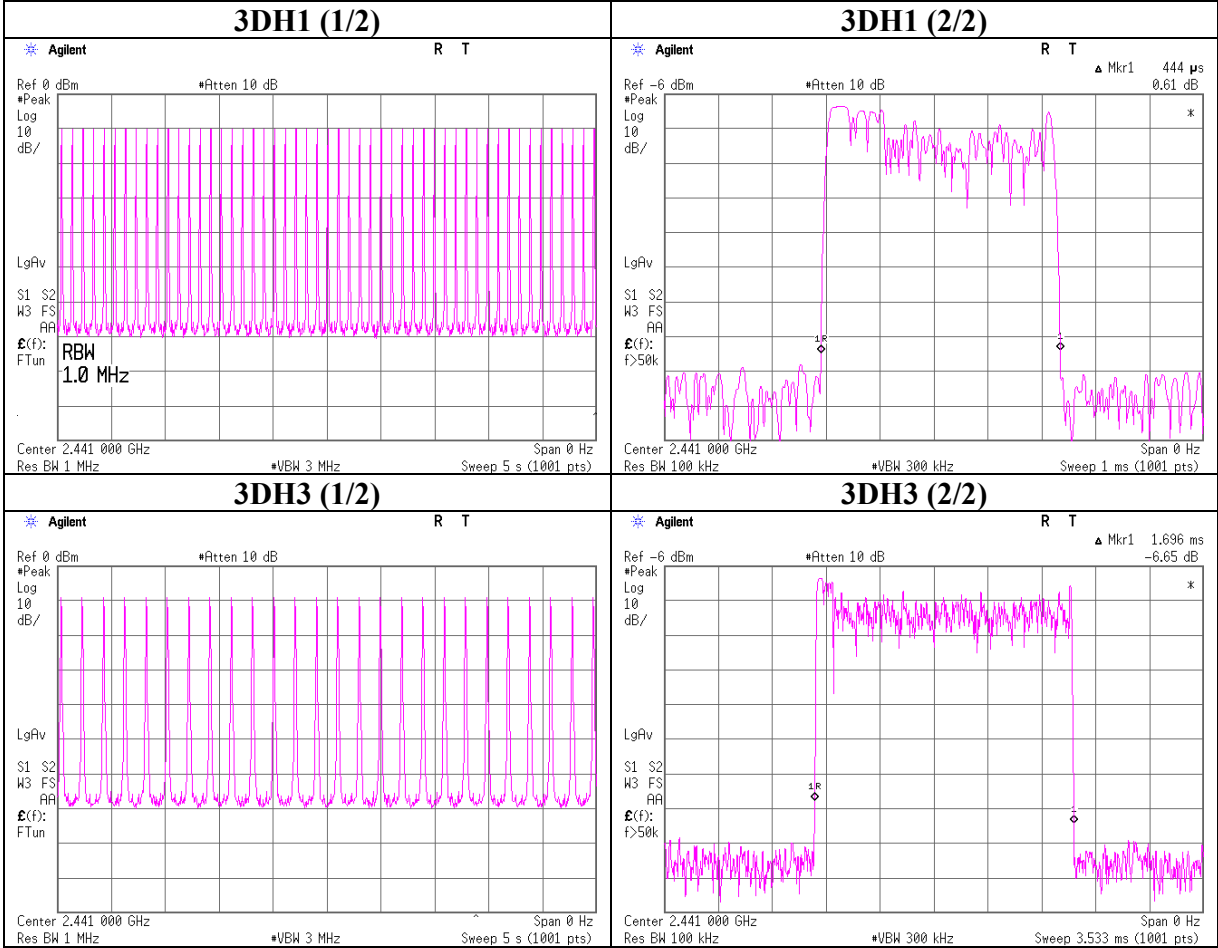


Dwell time (EDR)

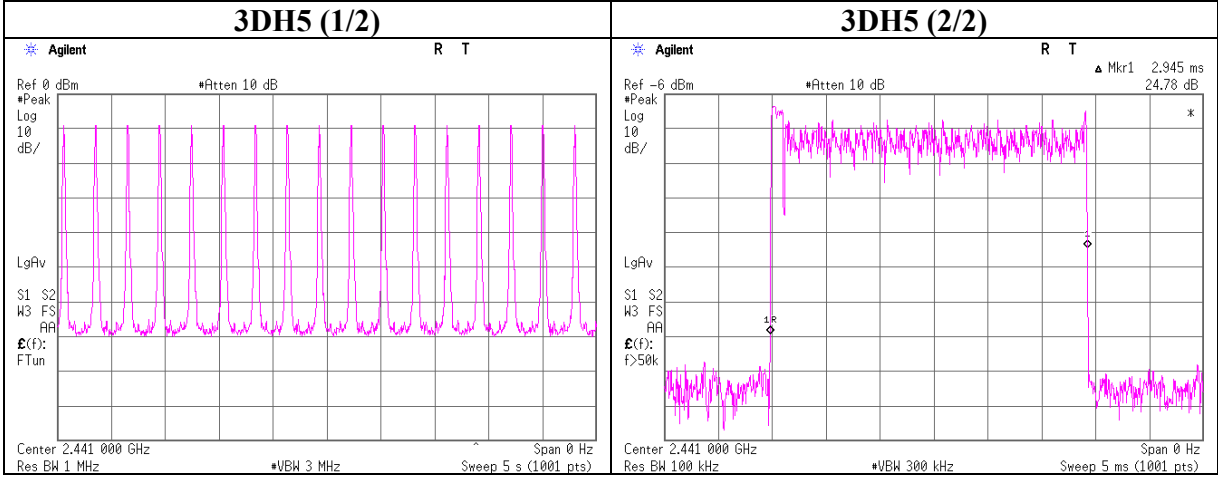
Company	DENSO CORPORATION	UL Japan, Inc.
Equipment	Navigation ECU	Head Office EMC Lab. No.6 Shielded room
Model	DNNS025	Regulation FCC15.247(a)(1)(iii) / RSS-210 A8.1(4)
S/N	12	Test Distance -
Power	DC12V	Date 09/26/2007
Mode	Bluetooth Tx Hopping On	Temperature 25 deg.C.
		Humidity 63 %
		Engineer Tomotaka Sasagawa

Mode	Number of transmission in a 31.6(79 Hopping x 0.4)	Length of transmission time [msec]	Result [msec]	Limit [msec]
3DH1	51 times / 5 sec. x 31.6 sec. = 323 times	0.444	143	400
3DH3	26 times / 5 sec. x 31.6 sec. = 165 times	1.696	280	400
3DH5	17 times / 5 sec. x 31.6 sec. = 108 times	2.945	318	400

Dwell time (EDR)



Dwell time (EDR)



Maximum Peak Output Power

	UL Japan, Inc.	
	Head Office EMC Lab. No.6 Shielded room	
Company	DENSO CORPORATION	Regulation
Equipment	Navigation ECU	FCC15.247(b)(1) / RSS-210 A8.4(2)
Model	DNNS025	Test Distance
S/N	12	-
Power	DC12V	Date
Mode	Bluetooth Tx Hopping Off	09/26/2007
		Temperature
		25 deg.C.
		Humidity
		63 %
		Engineer
		Tomotaka Sasagawa

DH5

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-1.78	0.87	0.00	-0.91	0.81	20.97	125	21.88
Mid	2441.0	-1.18	0.88	0.00	-0.30	0.93	20.97	125	21.27
High	2480.0	-1.96	0.89	0.00	-1.07	0.78	20.97	125	22.04

2DH5

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	2.71	0.87	0.00	3.58	2.28	20.97	125	17.39
Mid	2441.0	1.98	0.88	0.00	2.86	1.93	20.97	125	18.11
High	2480.0	0.77	0.89	0.00	1.66	1.47	20.97	125	19.31

3DH5

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	2.76	0.87	0.00	3.63	2.31	20.97	125	17.34
Mid	2441.0	2.29	0.88	0.00	3.17	2.07	20.97	125	17.80
High	2480.0	1.27	0.89	0.00	2.16	1.64	20.97	125	18.81

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

*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.

UL Japan, Inc.

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Radiated Spurious Emission (below 1GHz)
Tx, Ch. Low(DH5)

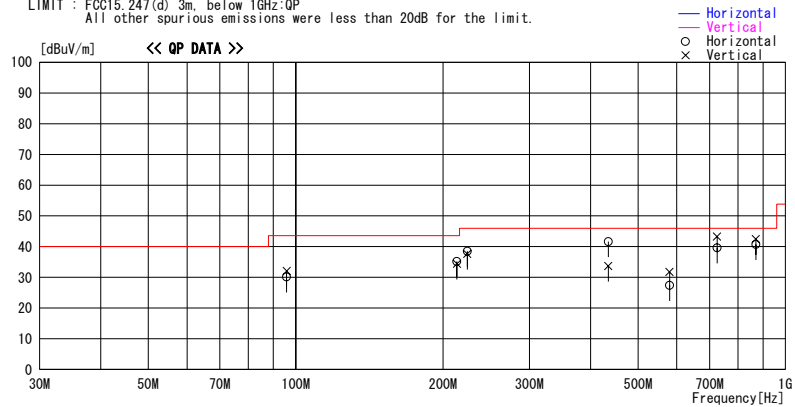
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2007/10/05

Company : DENSO CORPORATION
Kind of EUT : Navigation ECU
Model No. : DNN5025
Serial No. : 12
Report No. : 28AE0322-H0
Power : DC12V
Temp./Humi. : 26deg. C. / 65%
Operator : Takahiro Hatakeda

Mode / Remarks : Bluetooth, Tx, 2402MHz, DH5

LIMIT : FCC15.247(d) 3m, below 1GHz-QP
All other spurious emissions were less than 20dB for the limit.



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]	
95.786	42.4	QP	9.0	-21.3	30.1	141	325	Hori.	43.5	13.4	
95.786	44.4	QP	9.0	-21.3	32.1	0	100	Vert.	43.5	11.4	
213.336	37.8	QP	17.2	-19.8	35.2	156	100	Hori.	43.5	8.3	
213.336	37.0	QP	17.2	-19.8	34.4	0	100	Vert.	43.5	9.1	
224.005	41.1	QP	17.0	-19.6	38.5	174	300	Hori.	46.0	7.5	
224.005	40.2	QP	17.0	-19.6	37.6	349	100	Vert.	46.0	8.4	
434.848	34.9	QP	18.1	-19.3	33.7	180	114	Vert.	46.0	12.4	
434.848	42.8	QP	18.1	-19.3	41.6	88	100	Hori.	46.0	4.4	
579.797	27.2	QP	19.3	-19.1	27.4	39	100	Hori.	46.0	18.6	
579.797	31.6	QP	19.3	-19.1	31.8	0	118	Vert.	46.0	14.2	
724.745	37.2	QP	20.7	-18.3	39.6	142	118	Hori.	46.0	6.4	
724.745	40.9	QP	20.7	-18.3	43.3	0	100	Vert.	46.0	2.7	
869.685	35.9	QP	22.0	-17.2	40.7	295	100	Hori.	46.0	5.3	
869.685	37.7	QP	22.0	-17.2	42.5	0	250	Vert.	46.0	3.5	

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

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

Radiated Spurious Emission (below 1GHz)
Tx, Ch. Mid(DH5)

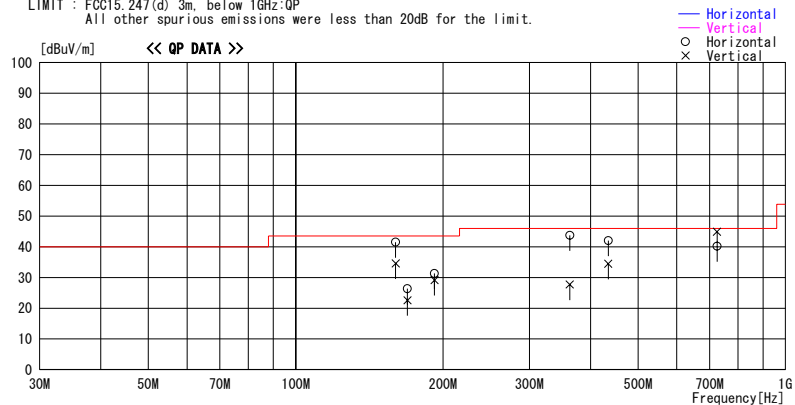
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/10/05

Company : DENSO CORPORATION
Kind of EUT : Navigation ECU
Model No. : DNN5025
Serial No. : 12
Report No. : 28AE0322-H0
Power : DC12V
Temp./Humi. : 26deg.C. / 65%
Operator : Takahiro Hatakeda

Mode / Remarks : Bluetooth, Tx, 2441MHz, DH5

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		Factor	Gain	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
160.007	46.8	QP	15.2	-20.5	41.5	175	146	Hori.	43.5	2.0	
160.007	39.9	QP	15.2	-20.5	34.6	142	274	Vert.	43.5	8.9	
169.106	31.0	QP	15.8	-20.4	26.4	135	160	Hori.	43.5	17.1	
169.106	27.2	QP	15.8	-20.4	22.6	182	100	Vert.	43.5	20.9	
192.002	34.2	QP	17.1	-20.0	31.3	260	301	Hori.	43.5	12.2	
192.002	32.1	QP	17.1	-20.0	29.2	0	100	Vert.	43.5	14.3	
362.664	46.3	QP	16.7	-19.2	43.8	0	100	Hori.	46.0	2.2	
362.664	30.2	QP	16.7	-19.2	27.7	192	271	Vert.	46.0	18.3	
434.854	43.2	QP	18.1	-19.3	42.0	90	100	Hori.	46.0	4.0	
434.854	35.7	QP	18.1	-19.3	34.5	180	100	Vert.	46.0	11.5	
724.736	37.8	QP	20.7	-18.3	40.2	120	150	Hori.	46.0	5.8	
724.736	42.5	QP	20.7	-18.3	44.9	326	100	Vert.	46.0	1.1	

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

Radiated Spurious Emission (below 1GHz)
Tx, Ch. High(DH5)

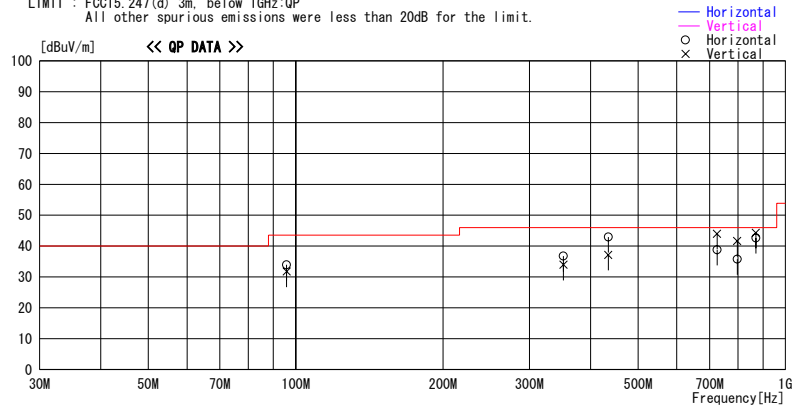
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/10/05

Company : DENSO CORPORATION
Kind of EUT : Navigation ECU
Model No. : DNN5025
Serial No. : 12
Report No. : 28AE0322-H0
Power : DC12V
Temp./Humi. : 26deg. C. / 65%
Operator : Takahiro Hatakeda

Mode / Remarks : Bluetooth, Tx, 2480MHz, DH5

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



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]	
95.792	46.3	QP	9.0	-21.3	34.0	295	292	Hori.	43.5	9.5	
95.792	44.1	QP	9.0	-21.3	31.8	0	104	Vert.	43.5	11.7	
351.990	39.6	QP	16.4	-19.2	36.8	355	100	Hori.	46.0	9.2	
351.990	36.8	QP	16.4	-19.2	34.0	204	254	Vert.	46.0	12.0	
434.845	38.4	QP	18.1	-19.3	37.2	161	120	Vert.	46.0	8.8	
434.845	44.1	QP	18.1	-19.3	42.9	101	100	Hori.	46.0	3.1	
724.746	36.4	QP	20.7	-18.3	38.8	138	121	Hori.	46.0	7.2	
724.746	41.6	QP	20.7	-18.3	44.0	0	100	Vert.	46.0	2.0	
797.215	31.7	QP	22.0	-17.9	35.8	290	190	Hori.	46.0	10.2	
797.215	37.6	QP	22.0	-17.9	41.7	333	100	Vert.	46.0	4.3	
869.691	37.8	QP	22.0	-17.2	42.6	163	177	Hori.	46.0	3.4	
869.691	39.6	QP	22.0	-17.2	44.4	329	100	Vert.	46.0	1.7	

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

Radiated Spurious Emission (below 1GHz)
Tx, Ch. Low(3DH5)

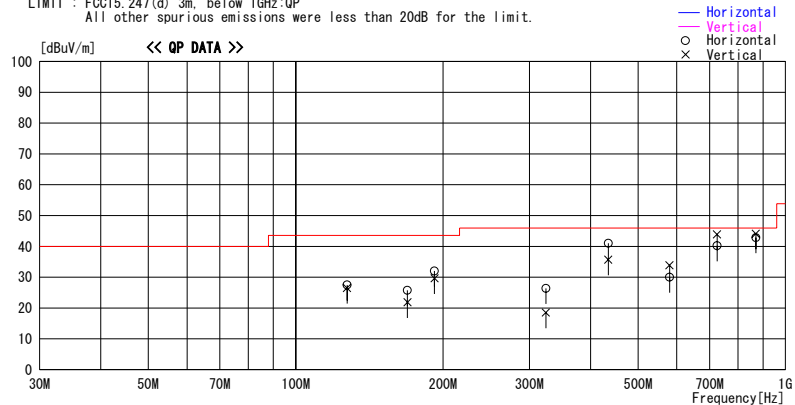
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/10/05

Company : DENSO CORPORATION
Kind of EUT : Navigation ECU
Model No. : DNNS025
Serial No. : 12
Report No. : 28AE0322-H0
Power : DC12V
Temp./Humi. : 26deg. C. / 65%
Operator : Takahiro Hatakeda

Mode / Remarks : Bluetooth, Tx, 2402MHz, 3DH5

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



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]	
127.260	34.0	QP	13.4	-20.9	26.5	321	117	Vert.	43.5	17.0	
127.260	35.0	QP	13.4	-20.9	27.5	139	167	Hori.	43.5	16.0	
169.109	30.4	QP	15.8	-20.4	25.8	142	169	Hori.	43.5	17.7	
169.109	26.5	QP	15.8	-20.4	21.9	170	112	Vert.	43.5	21.6	
192.004	32.5	QP	17.1	-20.0	29.6	0	100	Vert.	43.5	13.9	
192.004	35.0	QP	17.1	-20.0	32.1	259	295	Hori.	43.5	11.5	
324.036	30.1	QP	15.4	-19.1	26.4	0	100	Hori.	46.0	19.7	
324.036	22.2	QP	15.4	-19.1	18.5	0	100	Vert.	46.0	27.5	
434.844	42.3	QP	18.1	-19.3	41.1	95	103	Hori.	46.0	5.0	
434.844	36.9	QP	18.1	-19.3	35.7	179	100	Vert.	46.0	10.3	
579.793	29.8	QP	19.3	-19.1	30.0	44	100	Hori.	46.0	16.0	
579.793	33.7	QP	19.3	-19.1	33.9	0	128	Vert.	46.0	12.1	
724.740	37.8	QP	20.7	-18.3	40.2	145	116	Hori.	46.0	5.8	
724.740	41.5	QP	20.7	-18.3	43.9	0	100	Vert.	46.0	2.1	
869.688	38.0	QP	22.0	-17.2	42.8	228	178	Hori.	46.0	3.2	
869.688	39.4	QP	22.0	-17.2	44.2	333	100	Vert.	46.0	1.9	

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

Radiated Spurious Emission (below 1GHz)
Tx, Ch. Mid(3DH5)

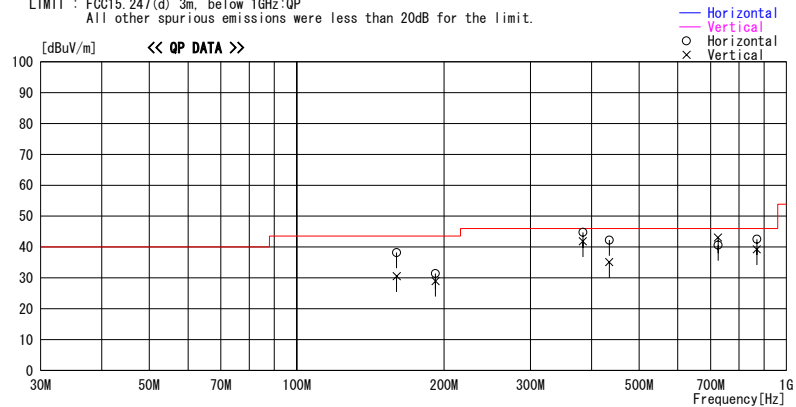
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2007/10/05

Company : DENSO CORPORATION
Kind of EUT : Navigation ECU
Model No. : DNN5025
Serial No. : 12
Report No. : 28AE0322-H0
Power : DC12V
Temp./Humi. : 26deg. C. / 65%
Operator : Takahiro Hatakeda

Mode / Remarks : Bluetooth, Tx, 2441MHz, 3DH5

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



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]	
159.999	43.5	QP	15.2	-20.5	38.2	92	303	Hori.	43.5	5.3	
159.999	35.8	QP	15.2	-20.5	30.5	0	100	Vert.	43.5	13.0	
191.996	34.3	QP	17.1	-20.0	31.4	172	300	Hori.	43.5	12.1	
191.996	31.9	QP	17.1	-20.0	29.0	0	100	Vert.	43.5	14.5	
383.998	46.6	QP	17.4	-19.2	44.8	0	100	Hori.	46.0	1.2	
383.998	43.7	QP	17.4	-19.2	41.9	213	100	Vert.	46.0	4.1	
434.842	43.4	QP	18.1	-19.3	42.2	100	100	Hori.	46.0	3.8	
434.842	36.3	QP	18.1	-19.3	35.1	0	100	Vert.	46.0	10.9	
724.743	38.2	QP	20.7	-18.3	40.6	359	100	Hori.	46.0	5.4	
724.743	40.7	QP	20.7	-18.3	43.1	43	100	Vert.	46.0	2.9	
869.689	37.7	QP	22.0	-17.2	42.5	192	150	Hori.	46.0	3.5	
869.689	34.5	QP	22.0	-17.2	39.3	10	100	Vert.	46.0	6.8	

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

Radiated Spurious Emission (below 1GHz)
Tx, Ch. High(3DH5)

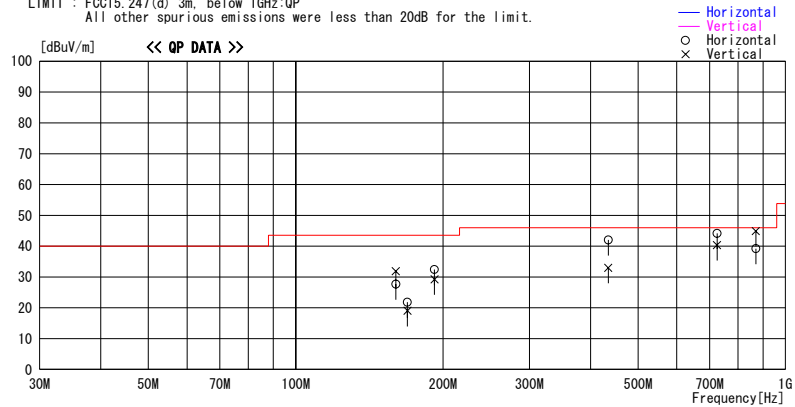
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2007/10/05

Company : DENSO CORPORATION
Kind of EUT : Navigation ECU
Model No. : DNN5025
Serial No. : 12
Report No. : 28AE0322-HO
Power : DC12V
Temp./Humi. : 26deg. C. / 65%
Operator : Takahiro Hatakeda

Mode / Remarks : Bluetooth, Tx, 2480MHz, 3DH5

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



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]	
160.049	33.0	QP	15.2	-20.5	27.7	172	180	Hori.	43.5	15.9	
160.049	37.2	QP	15.2	-20.5	31.9	281	100	Vert.	43.5	11.6	
169.103	23.6	QP	15.8	-20.4	19.0	0	100	Vert.	43.5	24.5	
169.103	26.5	QP	15.8	-20.4	21.9	340	326	Hori.	43.5	21.6	
191.995	35.3	QP	17.1	-20.0	32.4	292	300	Hori.	43.5	11.1	
191.995	32.2	QP	17.1	-20.0	29.3	0	100	Vert.	43.5	14.2	
434.844	43.2	QP	18.1	-19.3	42.0	84	121	Hori.	46.0	4.0	
434.844	34.2	QP	18.1	-19.3	33.0	180	100	Vert.	46.0	13.0	
724.749	38.0	QP	20.7	-18.3	40.4	81	100	Vert.	46.0	5.6	
724.749	41.8	QP	20.7	-18.3	44.2	0	100	Hori.	46.0	1.8	
869.692	40.2	QP	22.0	-17.2	45.0	341	100	Vert.	46.0	1.0	
869.692	34.4	QP	22.0	-17.2	39.2	196	100	Hori.	46.0	6.8	

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

Radiated Spurious Emission (below 1GHz)
Rx, Ch. Mid

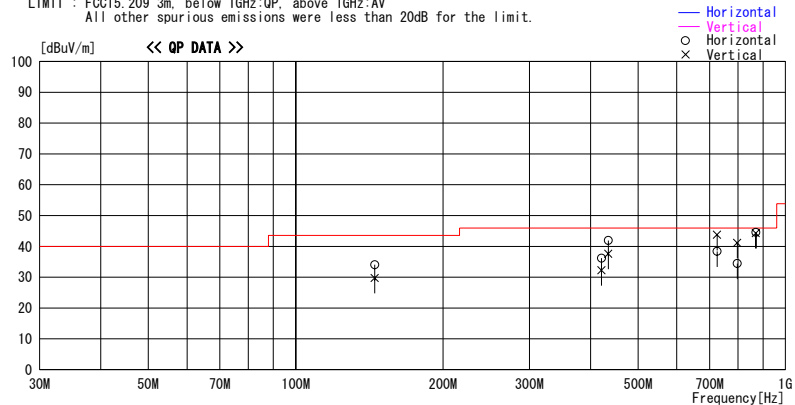
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/10/05

Company : DENSO CORPORATION
Kind of EUT : Navigation ECU
Model No. : DNNS025
Serial No. : 12
Report No. : 28AE0322-H0
Power : DC12V
Temp./Humi. : 26deg. C. / 65%
Operator : Takahiro Hatakeda

Mode / Remarks : Bluetooth, Rx, 2441MHz

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV
All other spurious emissions were less than 20dB for the limit.



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]	
144.951	40.5	QP	14.4	-20.8	34.1	267	222	Hori.	43.5	9.4	
144.951	36.2	QP	14.4	-20.8	29.8	264	165	Vert.	43.5	13.7	
420.968	37.6	QP	18.0	-19.4	36.2	63	100	Hori.	46.0	9.8	
420.968	33.7	QP	18.0	-19.4	32.3	355	100	Vert.	46.0	13.7	
434.847	43.2	QP	18.1	-19.3	42.0	196	100	Hori.	46.0	4.0	
434.847	38.9	QP	18.1	-19.3	37.7	181	127	Vert.	46.0	8.3	
724.746	36.0	QP	20.7	-18.3	38.4	227	129	Hori.	46.0	7.6	
724.743	41.4	QP	20.7	-18.3	43.8	0	106	Vert.	46.0	2.2	
797.217	30.3	QP	22.0	-17.9	34.4	68	108	Hori.	46.0	11.6	
797.217	37.1	QP	22.0	-17.9	41.2	337	100	Vert.	46.0	4.8	
869.691	39.5	QP	22.0	-17.2	44.3	334	100	Vert.	46.0	1.7	
869.691	39.8	QP	22.0	-17.2	44.6	237	105	Hori.	46.0	1.4	

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

Test report No. : 28AE0322-HO-A-R1
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Issued date : January 11, 2008
Revised date : February 4, 2008
FCC ID : HYQDNNS025

Radiated Spurious Emission (above 1GHz)

Tx, Ch. Low(DH5)

UL Japan, Inc.

Company : DENSO CORPORATION
Equipment : Navigation ECU
Model : DNNS025
S/N : 12
Power : DC 12V
Mode : Bluetooth, Tx, 2402MHz, DH5
Position : Normal Position

Head Office EMC Lab. No.2 Semi Anechoic Chamber
Regulation : FCC15.247(d) / RSS-210 A8.5
Test Distance : 3m / 1m / 0.5m
Date : 10/04/2007 , 10/05/2007
Temperature : 26deg.C , 26deg.C.
Humidity : 52% , 65%
Engineer : Takahiro Hatakeda

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	55.2	56.3	24.7	33.7	2.5	0.0	48.7	49.8	73.9	25.2	24.1
2	1449.5	50.2	53.1	25.7	33.2	2.8	0.0	45.5	48.4	73.9	28.4	25.5
3	2390.0	45.5	44.6	27.1	32.3	3.8	0.0	44.1	43.2	73.9	29.8	30.7
4	2400.0	62.5	54.6	27.1	32.3	3.8	0.0	61.1	53.2	73.9	12.8	20.7
5	4804.0	47.0	45.2	31.3	31.6	5.0	0.5	52.2	50.4	73.9	21.7	23.5
6	7206.0	42.8	42.7	35.7	31.4	5.7	0.6	53.4	53.3	73.9	20.5	20.6
7	9608.0	43.9	43.1	38.5	31.9	6.7	0.8	58.0	57.2	73.9	15.9	16.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
8	12010.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	14412.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	16814.0	NS	NS	-	-	-	-	-	-	73.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
11	19216.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	21618.0	NS	NS	-	-	-	-	-	-	73.9	-	-
13	24020.0	42.1	42.1	40.6	30.7	11.0	1.3	48.8	48.8	73.9	25.1	25.1

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	44.6	47.5	24.7	33.7	2.5	0.0	38.1	41.0	53.9	15.8	12.9
2	1449.5	38.0	41.9	25.7	33.2	2.8	0.0	33.3	37.2	53.9	20.6	16.7
3	2390.0	31.2	30.1	27.1	32.3	3.8	0.0	29.8	28.7	53.9	24.1	25.2
4	2400.0	46.6	40.1	27.1	32.3	3.8	0.0	45.2	38.7	53.9	8.7	15.2
5	4804.0	36.1	34.5	31.3	31.6	5.0	0.5	41.3	39.7	53.9	12.6	14.2
6	7206.0	29.7	29.6	35.7	31.4	5.7	0.6	40.3	40.2	53.9	13.6	13.7
7	9608.0	30.2	30.1	38.5	31.9	6.7	0.8	44.3	44.2	53.9	9.6	9.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
8	12010.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	14412.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	16814.0	NS	NS	-	-	-	-	-	-	53.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
11	19216.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	21618.0	NS	NS	-	-	-	-	-	-	53.9	-	-
13	24020.0	32.7	32.6	40.6	30.7	11.0	1.3	39.4	39.3	53.9	14.5	14.6

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

*NS: Non Signal

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Radiated Spurious Emission (above 1GHz) Tx, Ch. Mid(DH5)

UL Japan, Inc.

Company : DENSO CORPORATION
Equipment : Navigation ECU
Model : DNN025
S/N : 12
Power : DC 12V
Mode : Bluetooth, Tx, 2441MHz, DH5
Position : Normal Position

Head Office EMC Lab. No.2 Semi Anechoic Chamber
Regulation : FCC15.247(d) / RSS-210 A8.5
Test Distance : 3m / 1m / 0.5m
Date : 10/04/2007 , 10/05/2007
Temperature : 26deg.C. , 26deg.C.
Humidity : 52% , 65%
Engineer : Takahiro Hatakeda

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	52.7	51.0	24.7	33.7	2.5	0.0	46.2	44.5	73.9	27.7	29.4
2	1449.5	48.3	51.9	25.7	33.2	2.8	0.0	43.6	47.2	73.9	30.3	26.7
3	4882.0	47.8	47.4	31.4	31.6	5.0	0.4	53.0	52.6	73.9	20.9	21.3
4	7323.0	42.5	43.1	36.0	31.4	5.8	0.7	53.6	54.2	73.9	20.3	19.7
5	9764.0	42.6	42.5	38.7	32.0	6.8	0.7	56.8	56.7	73.9	17.1	17.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12205.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	14646.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	17087.0	NS	NS	-	-	-	-	-	-	73.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
9	19528.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	21969.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	24410.0	42.0	41.2	40.7	30.6	11.1	1.3	49.0	48.2	73.9	24.9	25.7

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	42.7	43.0	24.7	33.7	2.5	0.0	36.2	36.5	53.9	17.7	17.4
2	1449.5	36.1	40.5	25.7	33.2	2.8	0.0	31.4	35.8	53.9	22.5	18.1
3	4882.0	38.6	38.5	31.4	31.6	5.0	0.4	43.8	43.7	53.9	10.1	10.2
4	7323.0	29.4	29.4	36.0	31.4	5.8	0.7	40.5	40.5	53.9	13.4	13.4
5	9764.0	29.6	29.5	38.7	32.0	6.8	0.7	43.8	43.7	53.9	10.1	10.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12205.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	14646.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	17087.0	NS	NS	-	-	-	-	-	-	53.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
9	19528.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	21969.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	24410.0	32.1	32.1	40.7	30.6	11.1	1.3	39.1	39.1	53.9	14.8	14.8

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/1.0) = 15.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

*NS: Non Signal

UL Japan, Inc.

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Radiated Spurious Emission (above 1GHz)

Tx, Ch. High(DH5)

UL Japan, Inc.

Company : DENSO CORPORATION
Equipment : Navigation ECU
Model : DNN025
S/N : 12
Power : DC 12V
Mode : Bluetooth, Tx, 2480MHz, DH5
Position : Normal Position

Head Office EMC Lab. No.2 Semi Anechoic Chamber
Regulation : FCC15.247(d) / RSS-210 A8.5
Test Distance : 3m / 1m / 0.5m
Date : 10/04/2007 , 10/05/2007
Temperature : 26deg.C. , 26deg.C.
Humidity : 52% , 65%
Engineer : Takahiro Hatakeda

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	51.5	54.8	24.7	33.7	2.5	0.0	45.0	48.3	73.9	28.9	25.6
2	1449.5	49.4	51.8	25.7	33.2	2.8	0.0	44.7	47.1	73.9	29.2	26.8
3	2483.5	49.7	44.1	27.2	32.3	3.9	0.0	48.5	42.9	73.9	25.4	31.0
4	4960.0	47.3	44.5	31.5	31.6	5.0	0.3	52.5	49.7	73.9	21.4	24.2
5	7440.0	43.6	43.0	36.2	31.4	5.8	0.6	54.8	54.2	73.9	19.1	19.7
6	9920.0	42.7	43.9	38.9	32.0	6.8	0.6	57.0	58.2	73.9	16.9	15.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12400.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	14880.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	17360.0	NS	NS	-	-	-	-	-	-	73.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
10	19840.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	22320.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	24800.0	42.4	43.8	40.8	30.5	11.4	1.1	49.7	51.1	73.9	24.2	22.8

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	41.2	44.1	24.7	33.7	2.5	0.0	34.7	37.6	53.9	19.2	16.3
2	1449.5	37.0	40.3	25.7	33.2	2.8	0.0	32.3	35.6	53.9	21.6	18.3
3	2483.5	35.2	31.3	27.2	32.3	3.9	0.0	34.0	30.1	53.9	19.9	23.8
4	4960.0	38.0	32.1	31.5	31.6	5.0	0.3	43.2	37.3	53.9	10.7	16.6
5	7440.0	29.5	29.5	36.2	31.4	5.8	0.6	40.7	40.7	53.9	13.2	13.2
6	9920.0	29.7	29.0	38.9	32.0	6.8	0.6	44.0	43.3	53.9	9.9	10.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12400.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	14880.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	17360.0	NS	NS	-	-	-	-	-	-	53.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
10	19840.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	22320.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	24800.0	32.8	33.0	40.8	30.5	11.4	1.1	40.1	40.3	53.9	13.8	13.6

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/1.0) = 15.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

*NS: Non Signal

UL Japan, Inc.

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Test report No. : 28AE0322-HO-A-R1
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Issued date : January 11, 2008
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FCC ID : HYQDNN025

Radiated Spurious Emission (above 1GHz)
Tx, Ch. Low(3DH5)

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : DENSO CORPORATION
Equipment : Navigation ECU
Model : DNN025
S/N : 12
Power : DC 12V
Mode : Bluetooth, Tx, 2402MHz, 3DH5
Position : Normal Position

Regulation : FCC15.247(d) / RSS-210 A8.5
Test Distance : 3m / 1m / 0.5m
Date : 10/04/2007 , 10/05/2007
Temperature : 26deg.C. , 26deg.C.
Humidity : 52% , 65%
Engineer : Takahiro Hatakeda

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER			
		[dBuV]									[dBuV/m]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	50.5	55.5	24.7	33.7	2.5	0.0	44.0	49.0	73.9	29.9	24.9
2	1449.5	48.8	53.0	25.7	33.2	2.8	0.0	44.1	48.3	73.9	29.8	25.6
3	2390.0	44.8	43.5	27.1	32.3	3.8	0.0	43.4	42.1	73.9	30.5	31.8
4	2400.0	62.7	55.2	27.1	32.3	3.8	0.0	61.3	53.8	73.9	12.6	20.1
5	4804.0	50.1	46.3	31.3	31.6	5.0	0.5	55.3	51.5	73.9	18.6	22.4
6	7206.0	42.7	44.3	35.7	31.4	5.7	0.6	53.3	54.9	73.9	20.6	19.0
7	9608.0	45.2	43.9	38.5	31.9	6.7	0.8	59.3	58.0	73.9	14.6	15.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
8	12010.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	14412.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	16814.0	NS	NS	-	-	-	-	-	-	73.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
11	19216.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	21618.0	NS	NS	-	-	-	-	-	-	73.9	-	-
13	24020.0	41.3	42.0	40.6	30.7	11.0	1.3	48.0	48.7	73.9	25.9	25.2

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	41.1	45.4	24.7	33.7	2.5	0.0	34.6	38.9	53.9	19.3	15.0
2	1449.5	36.3	41.1	25.7	33.2	2.8	0.0	31.6	36.4	53.9	22.3	17.5
3	2390.0	31.1	30.1	27.1	32.3	3.8	0.0	29.7	28.7	53.9	24.2	25.2
4	2400.0	46.1	39.7	27.1	32.3	3.8	0.0	44.7	38.3	53.9	9.2	15.6
5	4804.0	42.4	37.0	31.3	31.6	5.0	0.5	47.6	42.2	53.9	6.3	11.7
6	7206.0	29.6	29.6	35.7	31.4	5.7	0.6	40.2	40.2	53.9	13.7	13.7
7	9608.0	30.4	30.1	38.5	31.9	6.7	0.8	44.5	44.2	53.9	9.4	9.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
8	12010.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	14412.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	16814.0	NS	NS	-	-	-	-	-	-	53.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
11	19216.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	21618.0	NS	NS	-	-	-	-	-	-	53.9	-	-
13	24020.0	31.9	31.7	40.6	30.7	11.0	1.3	38.6	38.4	53.9	15.3	15.5

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

*NS: Non Signal

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Radiated Spurious Emission (above 1GHz) Tx, Ch. Mid(3DH5)

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : DENSO CORPORATION
Equipment : Navigation ECU
Model : DNN025
S/N : 12
Power : DC 12V
Mode : Bluetooth, Tx, 2441MHz, 3DH5
Position : Normal Position

Regulation : FCC15.247(d) / RSS-210 A8.5
Test Distance : 3m / 1m / 0.5m
Date : 10/04/2007 , 10/05/2007
Temperature : 26deg.C. , 26deg.C.
Humidity : 52% , 65%
Engineer : Takahiro Hatakeda

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	50.2	52.3	24.7	33.7	2.5	0.0	43.7	45.8	73.9	30.2	28.1
2	1449.5	48.4	51.3	25.7	33.2	2.8	0.0	43.7	46.6	73.9	30.2	27.3
3	4882.0	49.3	49.4	31.4	31.6	5.0	0.4	54.5	54.6	73.9	19.4	19.3
4	7323.0	43.2	43.3	36.0	31.4	5.8	0.7	54.3	54.4	73.9	19.6	19.5
5	9764.0	43.1	43.4	38.7	32.0	6.8	0.7	57.3	57.6	73.9	16.6	16.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12205.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	14646.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	17087.0	NS	NS	-	-	-	-	-	-	73.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
9	19528.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	21969.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	24410.0	40.7	41.0	40.7	30.6	11.1	1.3	47.7	48.0	73.9	26.2	25.9

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	42.3	45.5	24.7	33.7	2.5	0.0	35.8	39.0	53.9	18.1	14.9
2	1449.5	35.7	38.9	25.7	33.2	2.8	0.0	31.0	34.2	53.9	22.9	19.7
3	4882.0	37.7	37.7	31.4	31.6	5.0	0.4	42.9	42.9	53.9	11.0	11.0
4	7323.0	29.4	29.4	36.0	31.4	5.8	0.7	40.5	40.5	53.9	13.4	13.4
5	9764.0	29.6	29.6	38.7	32.0	6.8	0.7	43.8	43.8	53.9	10.1	10.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12205.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	14646.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	17087.0	NS	NS	-	-	-	-	-	-	53.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
9	19528.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	21969.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	24410.0	31.8	31.9	40.7	30.6	11.1	1.3	38.8	38.9	53.9	15.1	15.0

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/1.0) = 15.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

*NS: Non Signal

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Radiated Spurious Emission (above 1GHz) Tx, Ch. High(3DH5)

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : DENSO CORPORATION
Equipment : Navigation ECU
Model : DNN025
S/N : 12
Power : DC 12V
Mode : Bluetooth, Tx, 2480MHz, 3DH5
Position : Normal Position

Regulation : FCC15.247(d) / RSS-210 A8.5
Test Distance : 3m / 1m / 0.5m
Date : 10/04/2007 , 10/05/2007
Temperature : 26deg.C. , 26deg.C.
Humidity : 52% , 65%
Engineer : Takahiro Hatakeda

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	52.3	51.0	24.7	33.7	2.5	0.0	45.8	44.5	73.9	28.1	29.4
2	1449.5	48.5	50.7	25.7	33.2	2.8	0.0	43.8	46.0	73.9	30.1	27.9
3	2483.5	54.2	47.1	27.2	32.3	3.9	0.0	53.0	45.9	73.9	20.9	28.0
4	4960.0	48.2	49.6	31.5	31.6	5.0	0.3	53.4	54.8	73.9	20.5	19.1
5	7440.0	42.6	42.7	36.2	31.4	5.8	0.6	53.8	53.9	73.9	20.1	20.0
6	9920.0	43.2	42.8	38.9	32.0	6.8	0.6	57.5	57.1	73.9	16.4	16.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12400.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	14880.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	17360.0	NS	NS	-	-	-	-	-	-	73.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
10	19840.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	22320.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	24800.0	43.1	41.4	40.8	30.5	11.4	1.1	50.4	48.7	73.9	23.5	25.2

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	40.9	43.2	24.7	33.7	2.5	0.0	34.4	36.7	53.9	19.5	17.2
2	1449.5	35.7	39.4	25.7	33.2	2.8	0.0	31.0	34.7	53.9	22.9	19.2
3	2483.5	37.6	32.5	27.2	32.3	3.9	0.0	36.4	31.3	53.9	17.5	22.6
4	4960.0	36.7	37.5	31.5	31.6	5.0	0.3	41.9	42.7	53.9	12.0	11.2
5	7440.0	29.4	29.5	36.2	31.4	5.8	0.6	40.6	40.7	53.9	13.3	13.2
6	9920.0	29.7	29.7	38.9	32.0	6.8	0.6	44.0	44.0	53.9	9.9	9.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12400.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	14880.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	17360.0	NS	NS	-	-	-	-	-	-	53.9	-	-
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
10	19840.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	22320.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	24800.0	32.7	32.7	40.8	30.5	11.4	1.1	40.0	40.0	53.9	13.9	13.9

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/1.0) = 15.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

*NS: Non Signal

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Radiated Spurious Emission (above 1GHz) Rx, Ch. Mid

Company : DENSO CORPORATION
Equipment : Navigation ECU
Model : DNN025
S/N : 12
Power : DC 12V
Mode : Bluetooth, Rx, 2441MHz
Position : Normal Position

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
Regulation : FCC15.247(d) / RSS-210 A8.5
Test Distance : 3m
Date : 10/04/2007
Temperature : 26deg.C.
Humidity : 52%
Engineer : Takahiro Hatakeda

PK DETECT (RBW: 1MHz, VBW: 1MHz)

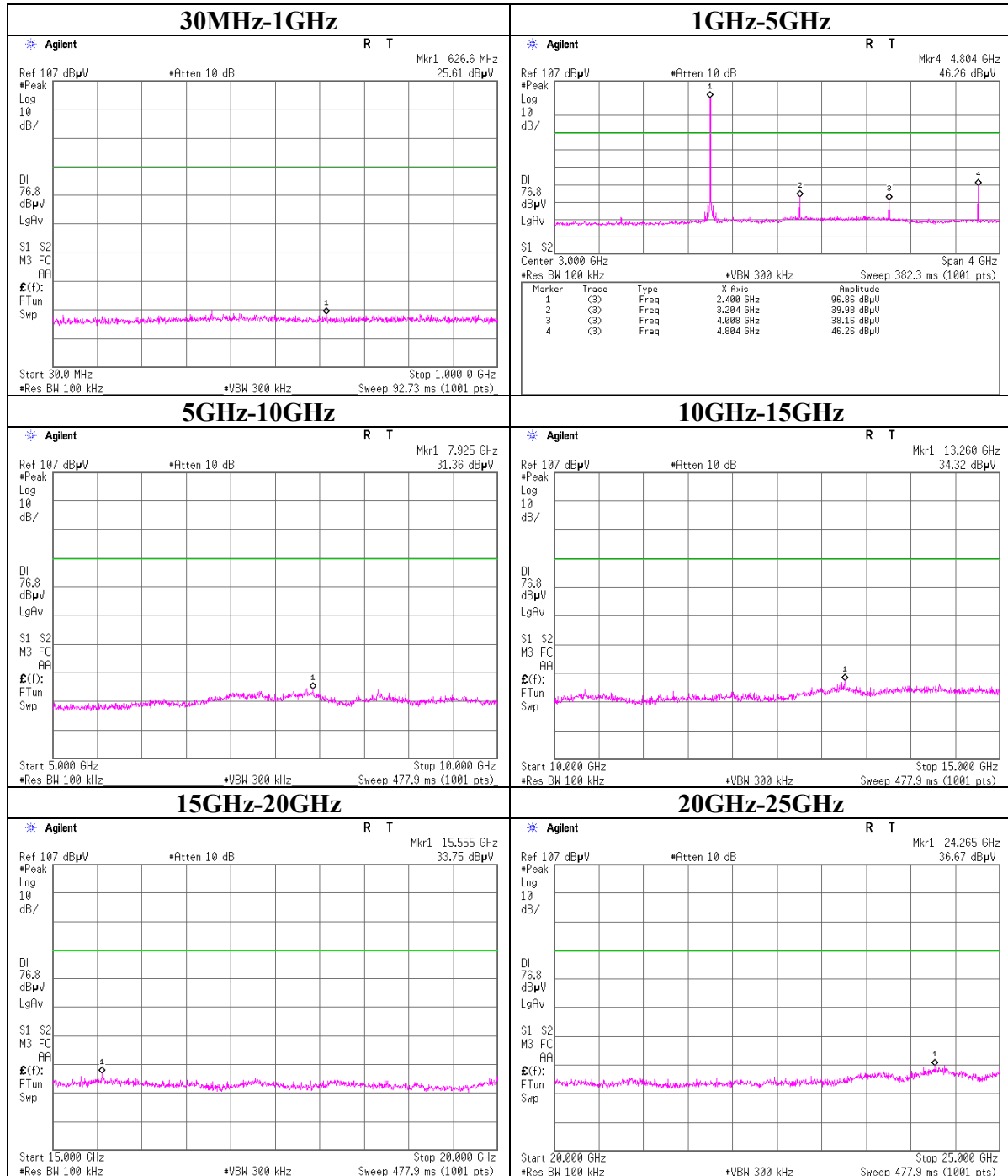
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	50.1	55.9	24.7	33.7	2.5	0.0	43.6	49.4	73.9	30.3	24.5
2	1449.5	48.4	52.5	25.7	33.2	2.8	0.0	43.7	47.8	73.9	30.2	26.1
3	2441.0	44.3	44.3	27.2	32.3	3.9	0.0	43.1	43.1	73.9	30.8	30.8
4	4882.0	41.1	40.3	31.4	31.6	5.0	0.0	45.9	45.1	73.9	28.0	28.8
5	7323.0	39.9	40.8	36.0	31.4	5.8	0.0	50.3	51.2	73.9	23.6	22.7
6	9764.0	41.1	40.7	38.7	32.0	6.8	0.0	54.6	54.2	73.9	19.3	19.7

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1159.6	42.3	45.6	24.7	33.7	2.5	0.0	35.8	39.1	53.9	18.1	14.8
2	1449.5	36.4	40.0	25.7	33.2	2.8	0.0	31.7	35.3	53.9	22.2	18.6
3	2441.0	33.9	34.5	27.2	32.3	3.9	0.0	32.7	33.3	53.9	21.2	20.6
4	4882.0	27.5	27.5	31.4	31.6	5.0	0.0	32.3	32.3	53.9	21.6	21.6
5	7323.0	27.0	27.0	36.0	31.4	5.8	0.0	37.4	37.4	53.9	16.5	16.5
6	9764.0	27.7	27.7	38.7	32.0	6.8	0.0	41.2	41.2	53.9	12.7	12.7

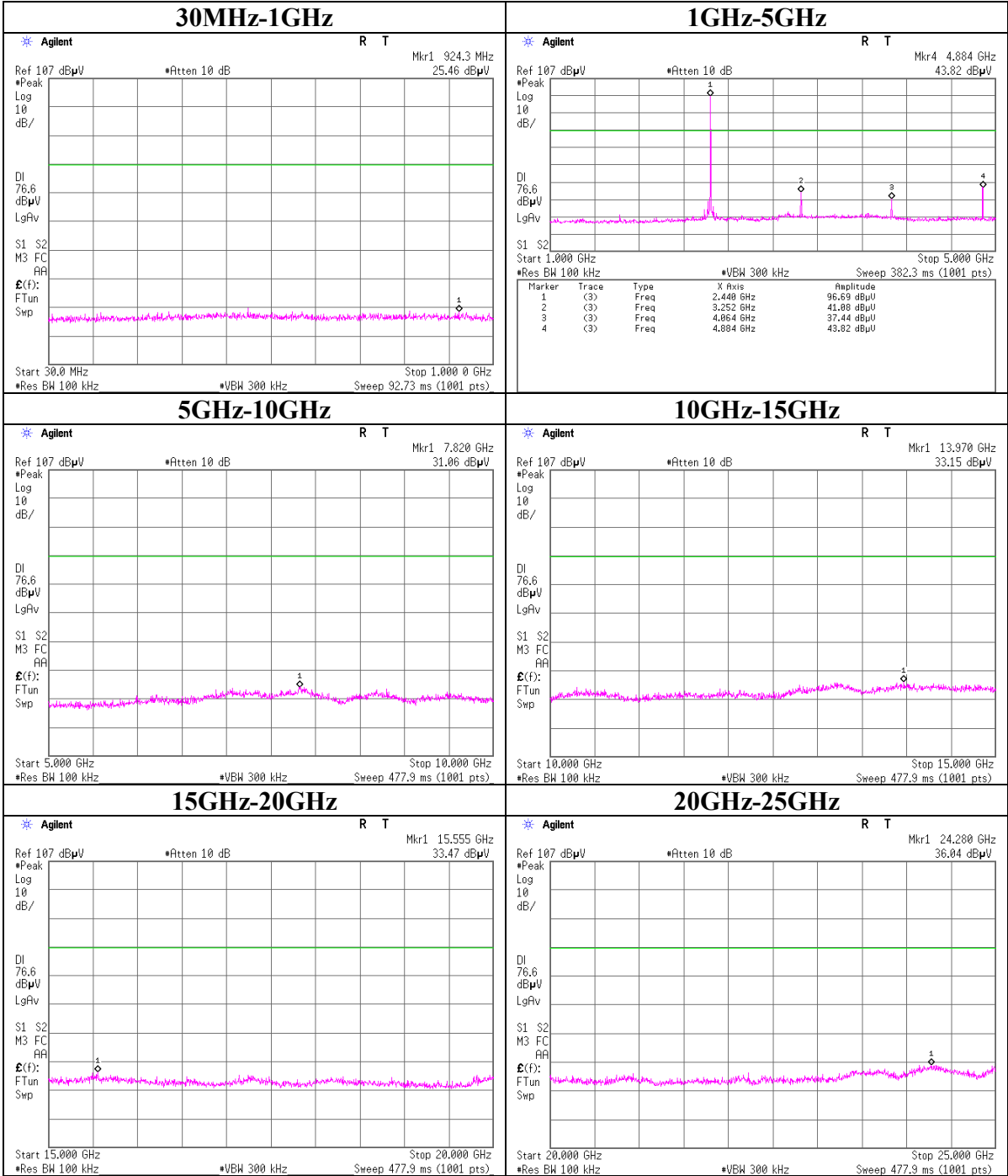
*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
*The test result is rounded off to one or two decimal places, so some differences might be observed.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.
*NS: Non Signal

Conducted Spurious Emission
Tx Ch:Low

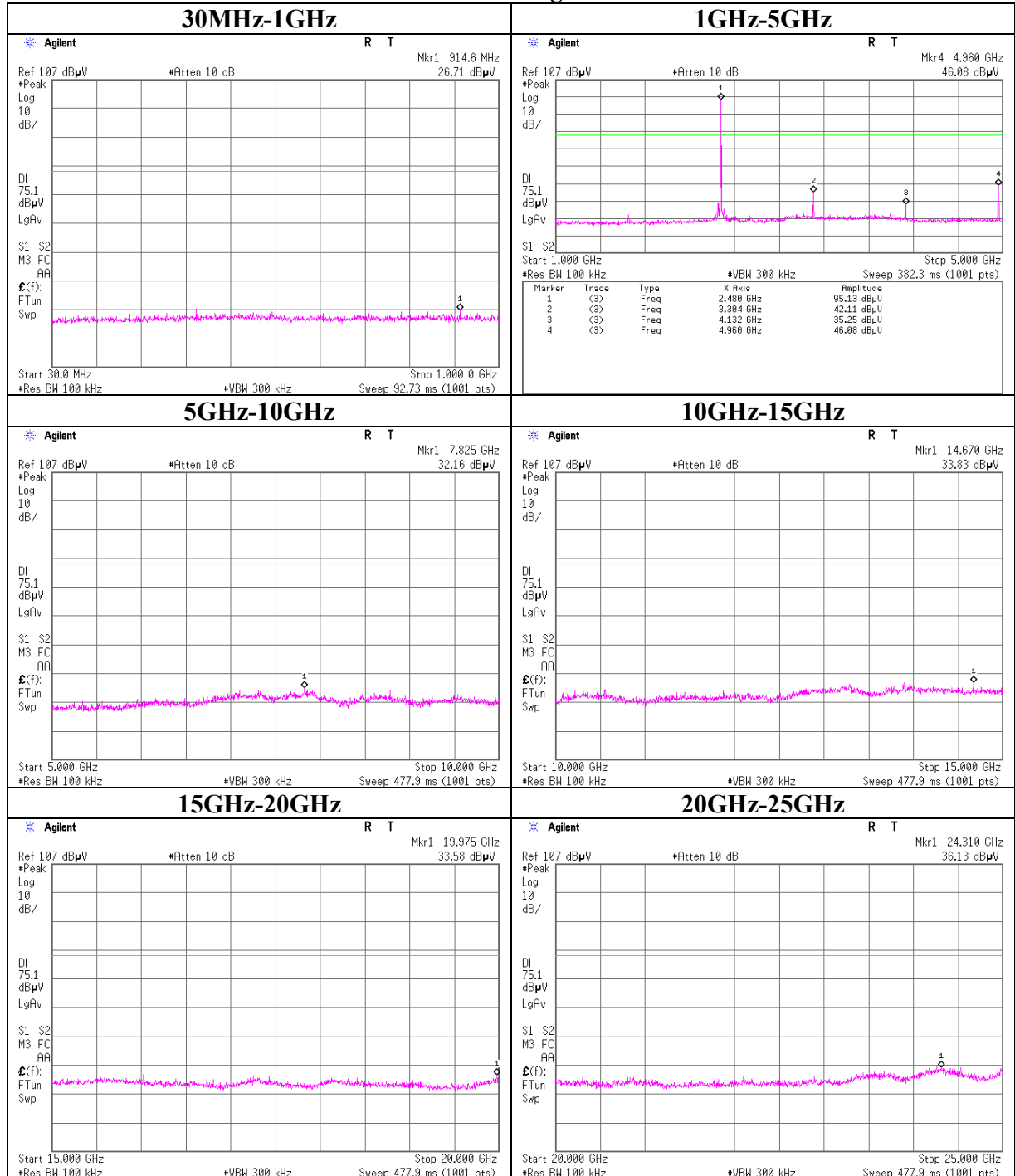


Conducted Spurious Emission

Tx Ch:Mid

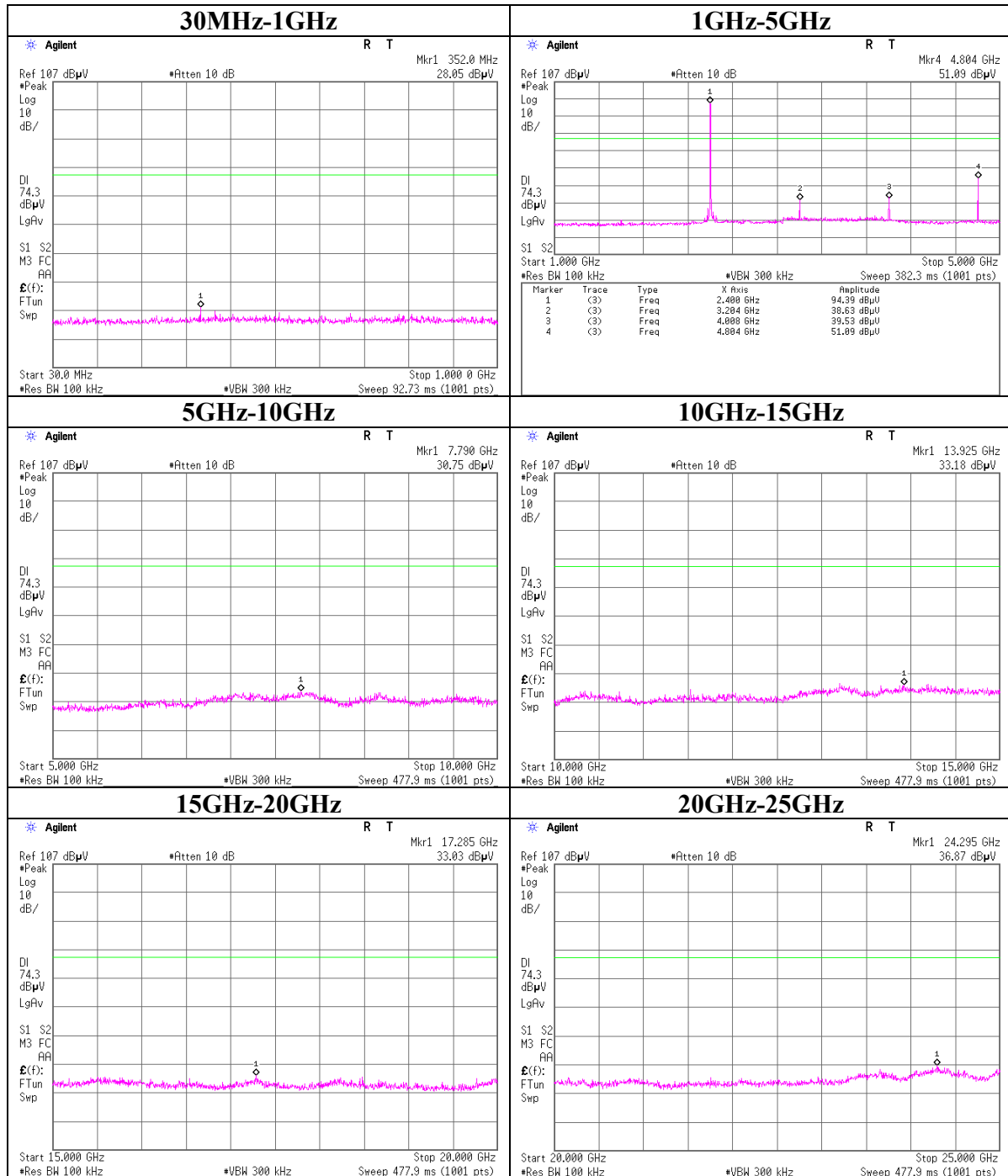


Conducted Spurious Emission
Tx Ch:High



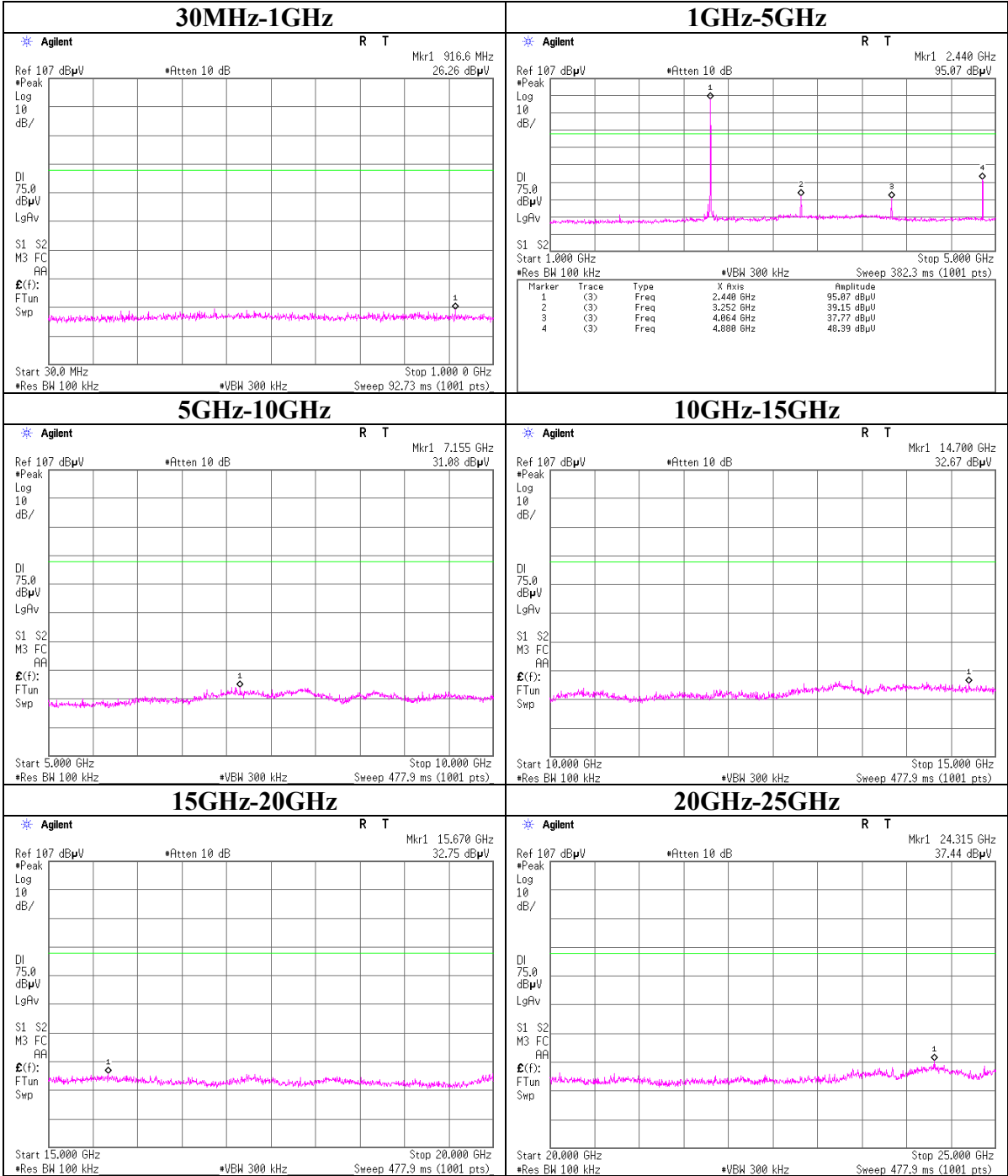
Conducted Spurious Emission (EDR)

Tx Ch:Low



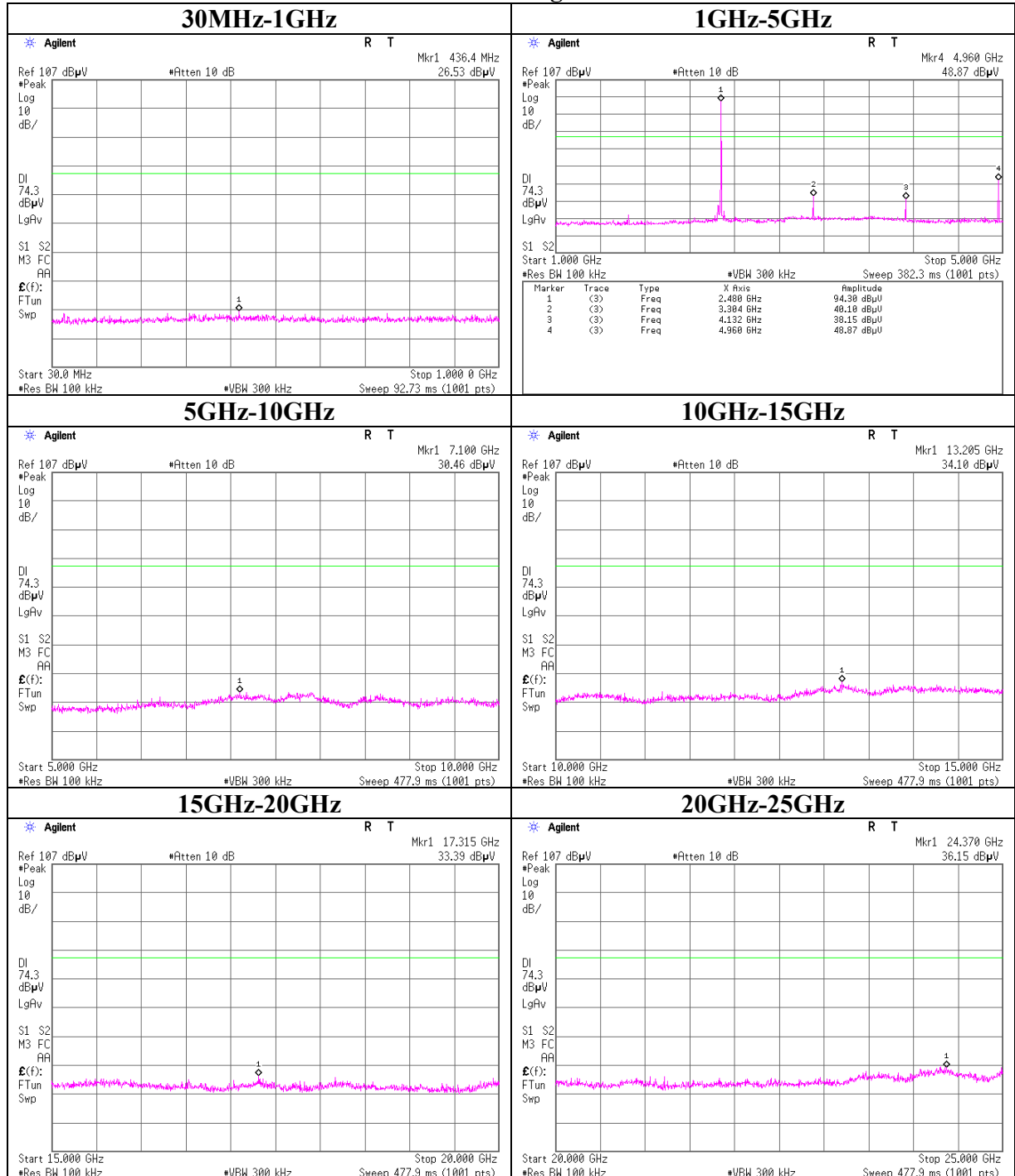
Conducted Spurious Emission (EDR)

Tx Ch:Mid

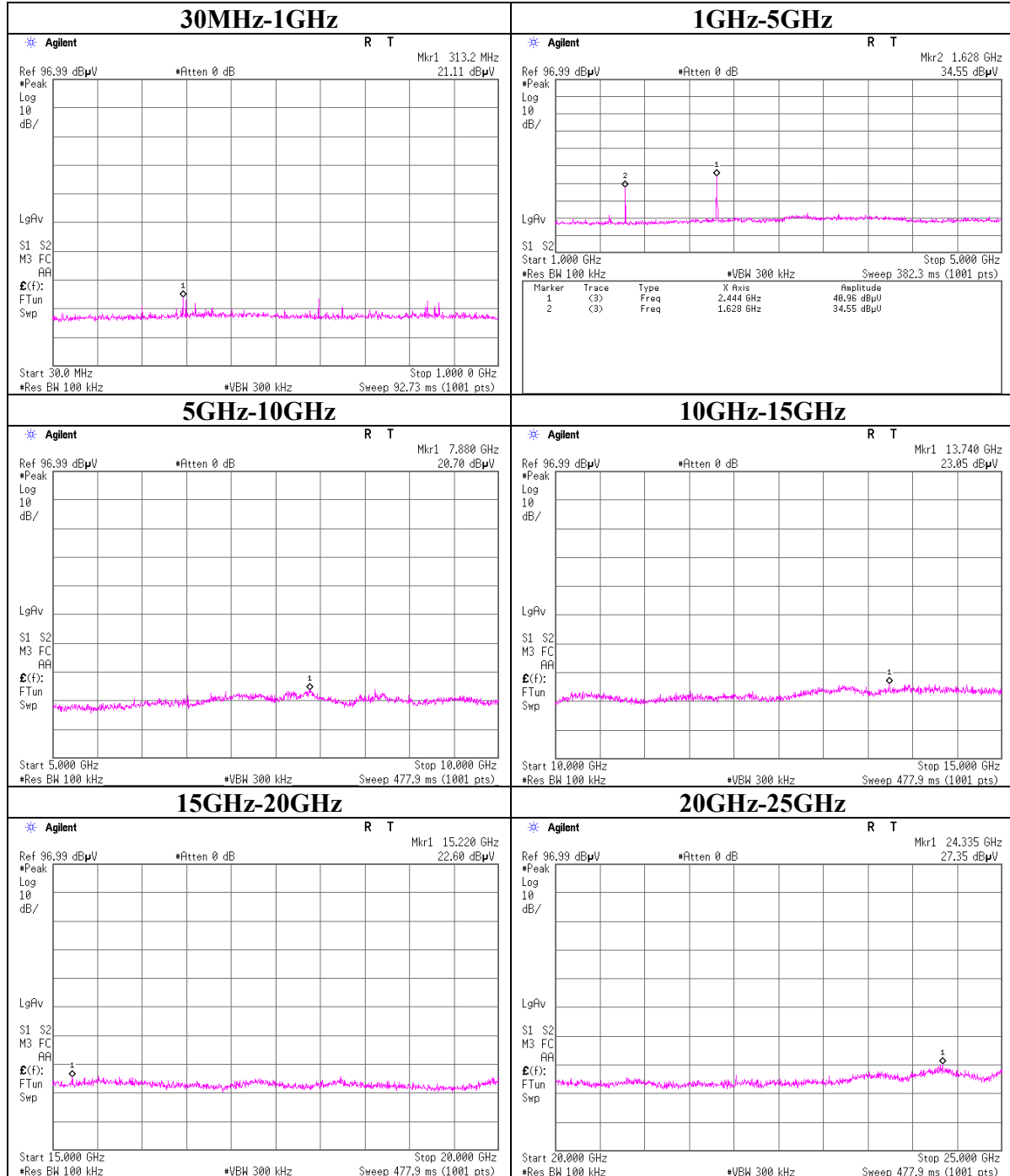


Conducted Spurious Emission (EDR)

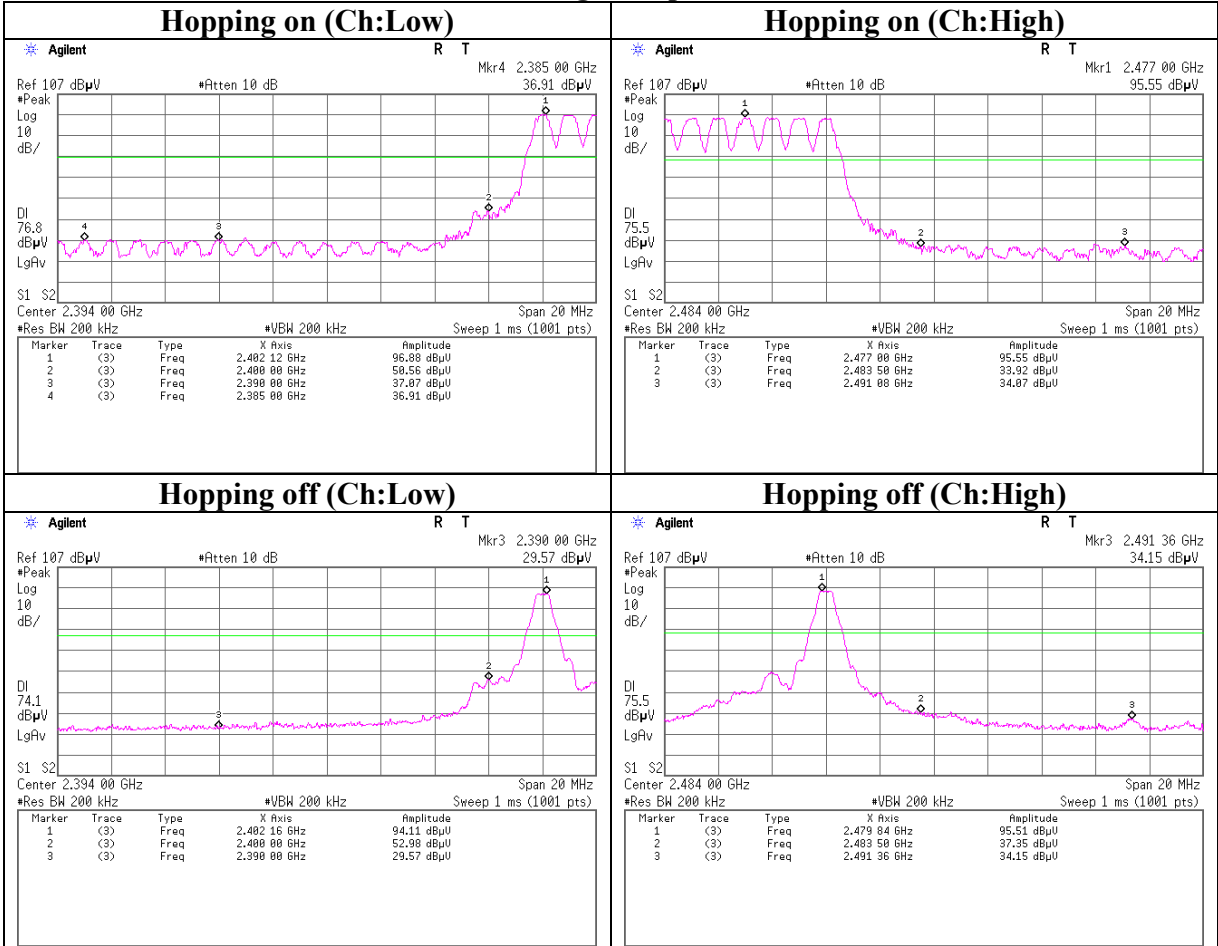
Tx Ch:High



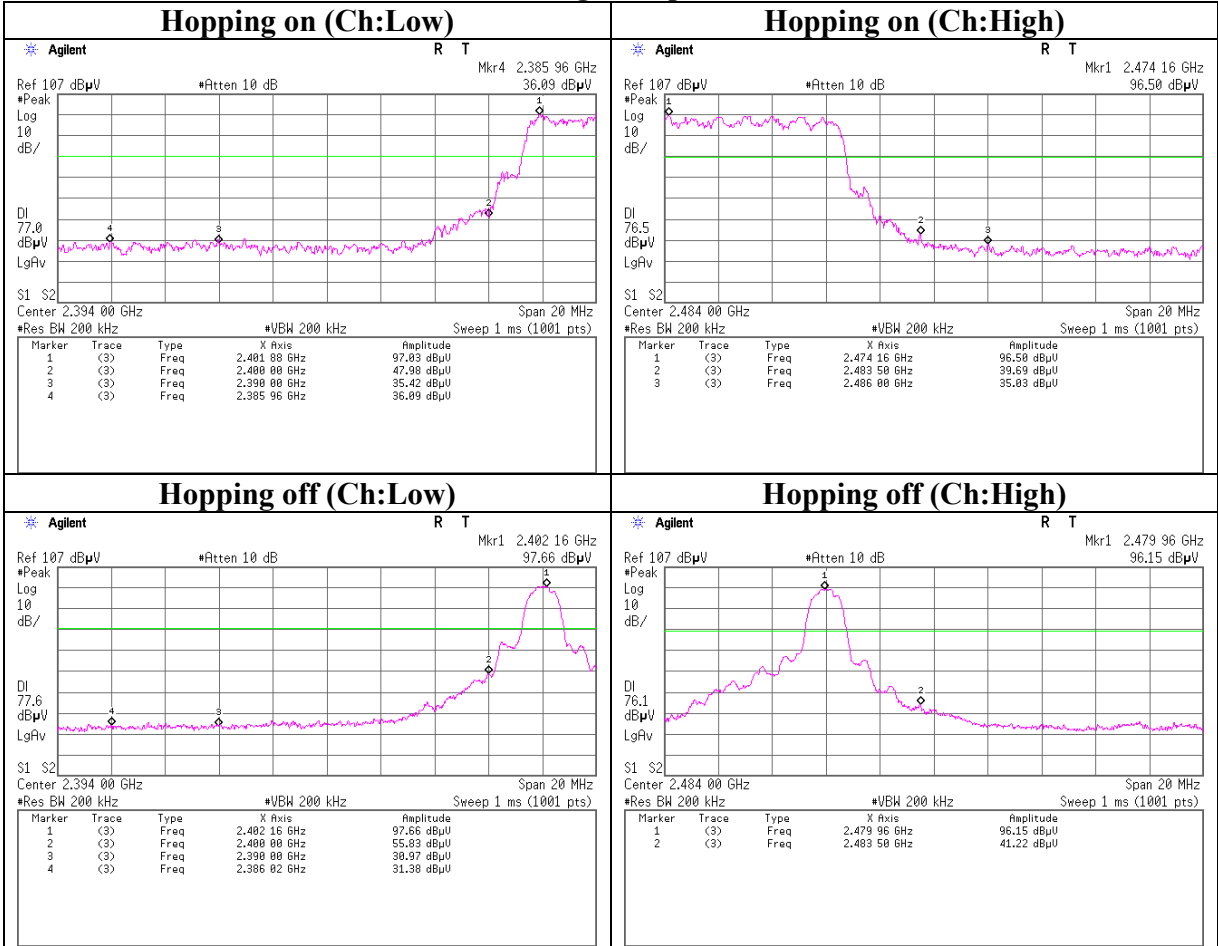
Conducted Spurious Emission
Rx Ch:Mid



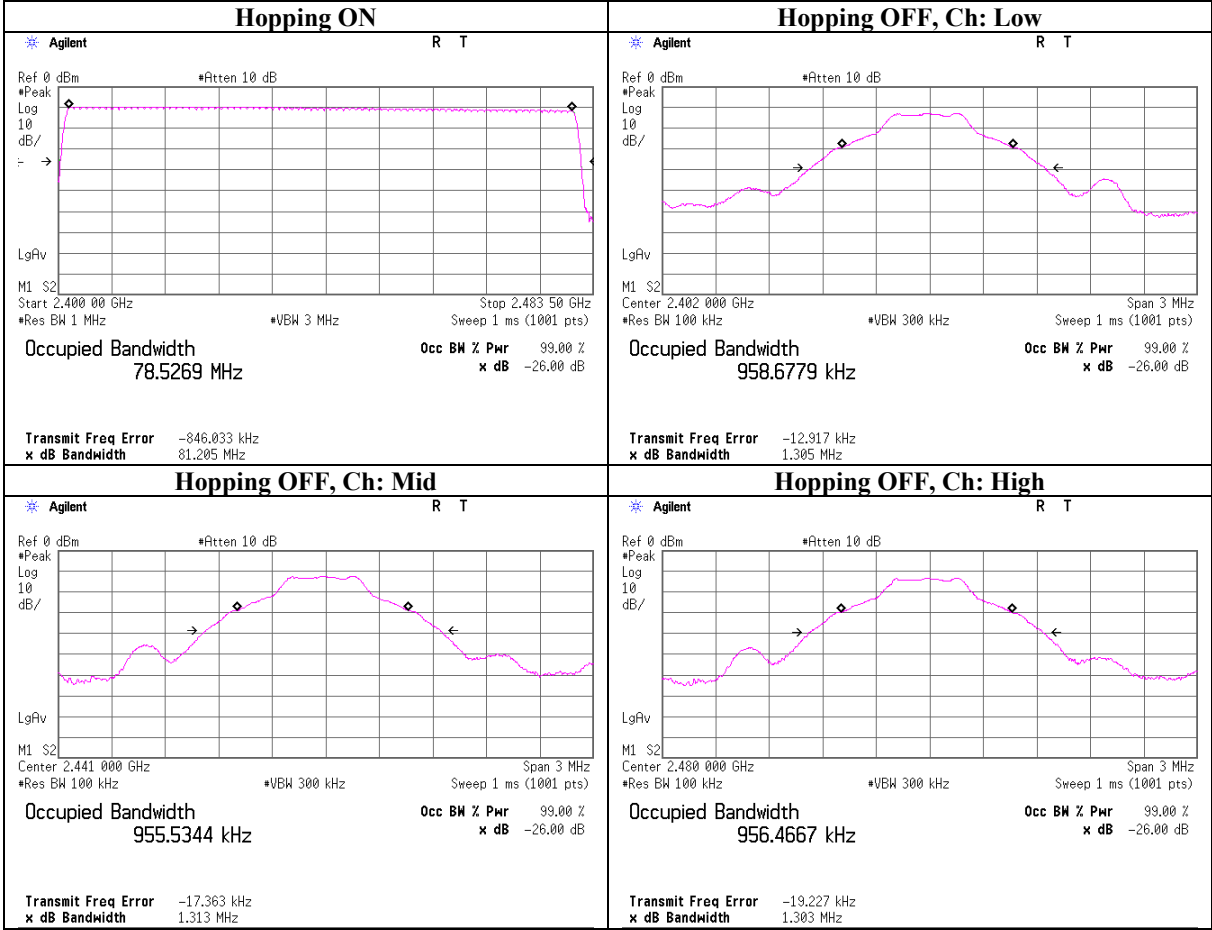
Conducted Spurious Emission
Band Edge compliance



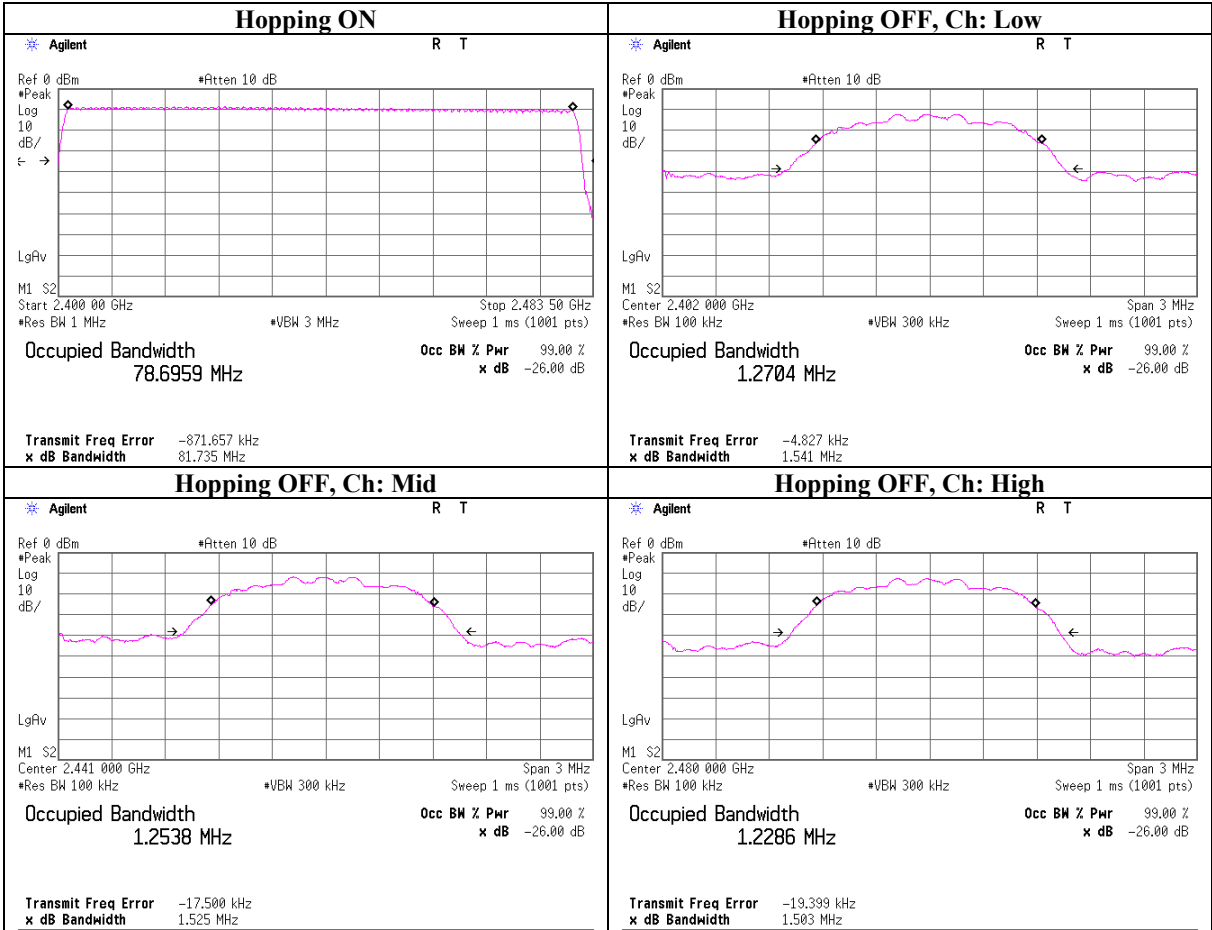
Conducted Spurious Emission (EDR)
Band Edge compliance



99% Occupied Bandwidth



99% Occupied Bandwidth (EDR)



APPENDIX 3:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MOS-14	Thermo-Hygrometer	Custom	CTH-180	AT	2006/01/19 * 24
MPM-09	Power Meter	Anritsu	ML2495A	AT	2007/09/22 * 12
MPSE-12	Power sensor	Anritsu	MA2411B	AT	2007/09/22 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	AT	2007/07/04 * 12
MAT-22	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	AT	2007/03/07 * 12
MCC-66	Microwave Cable 1G-40GHz	Schner	SUCOFLEX102	AT	2007/04/03 * 12
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2007/04/02 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2007/01/30 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/08/28 * 12
MCC-16	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2007/02/22 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2007/09/27 * 12
MHF-06	High Pass Filter 3.5-24GHz	Tokimec	TF323DCA	RE	2007/05/30 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	RE	2007/06/20 * 12
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE	-
MOS-02	Digital Humidity Indicator	N.T	NT-1800	RE	2006/11/27 * 12
MJM-05	Measure	PROMART	SEN1955	RE	-
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2006/10/07 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2006/10/07 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2006/12/27 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2007/02/27 * 12
MPA-09	Pre Amplifier	Agilent	8447D	RE	2007/09/13 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2007/01/30 * 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 test

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