

## DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/01

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A

Mode : FM Reception Digital (87.75 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< QP DATA >>

No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]					<QP> [dBuV/m]	<QP> [dB]	<QP> [dBuV/m]					
1	87.530	29.60	7.79	7.78	31.87	0.39	13.69	40.00	26.3	Hori.	346	354	BC	
2	87.970	27.00	7.87	7.79	31.87	0.38	11.17	40.00	28.8	Hori.	359	314	BC	
3	175.060	25.00	15.78	8.74	31.78	0.00	17.74	43.50	25.7	Hori.	168	37	BC	
4	175.940	26.20	15.88	8.74	31.78	-0.01	19.03	43.50	24.4	Hori.	191	32	BC	
5	263.910	38.40	12.41	6.14	31.69	0.00	25.26	46.00	20.7	Hori.	153	287	LP	
6	350.120	39.90	15.04	6.74	31.63	0.00	30.05	46.00	15.9	Hori.	112	208	LP	
7	612.710	24.10	19.37	8.17	31.60	0.00	20.04	46.00	25.9	Hori.	100	5	LP	
8	87.530	32.60	7.79	7.78	31.87	0.39	16.69	40.00	23.3	Vert.	126	188	BC	
9	87.970	30.60	7.87	7.79	31.87	0.38	14.77	40.00	25.2	Vert.	121	181	BC	
10	175.060	25.60	15.78	8.74	31.78	0.00	18.34	43.50	25.1	Vert.	100	344	BC	
11	175.940	25.90	15.88	8.74	31.78	-0.01	18.73	43.50	24.7	Vert.	100	100	BC	
12	263.910	34.60	12.41	6.14	31.69	0.00	21.46	46.00	24.5	Vert.	100	150	LP	
13	350.120	35.90	15.04	6.74	31.63	0.00	26.05	46.00	19.9	Vert.	100	39	LP	
14	700.240	25.80	19.79	8.57	31.56	0.00	22.60	46.00	23.4	Vert.	100	246	LP	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/01

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A

Mode : FM Reception Digital (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< QP DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP>	<QP>					<QP>	<QP>	<QP>					
		[dBuV]	[dBuV/m]					[dBuV/m]	[dBuV/m]	[dB]					
1	97.480	29.80	9.77	7.92	31.86	0.14	15.77	43.50	27.7	Hori.	314	97	BC		
2	97.920	28.90	9.85	7.92	31.86	0.12	14.93	43.50	28.5	Hori.	328	88	BC		
3	194.960	28.90	16.50	8.92	31.76	-0.14	22.42	43.50	21.0	Hori.	170	222	BC		
4	195.840	28.20	16.49	8.93	31.76	-0.14	21.72	43.50	21.7	Hori.	162	225	BC		
5	292.440	44.20	13.50	6.34	31.67	0.00	32.37	46.00	13.6	Hori.	158	206	LP		
6	389.920	37.00	15.41	6.96	31.63	0.00	27.74	46.00	18.2	Hori.	100	228	LP		
7	685.440	22.90	19.62	8.50	31.58	0.00	19.44	46.00	26.5	Hori.	127	210	LP		
8	97.480	37.70	9.77	7.92	31.86	0.14	23.67	43.50	19.8	Vert.	100	199	BC		
9	97.920	37.10	9.85	7.92	31.86	0.12	23.13	43.50	20.3	Vert.	100	199	BC		
10	194.960	29.50	16.50	8.92	31.76	-0.14	23.02	43.50	20.4	Vert.	100	291	BC		
11	195.840	28.20	16.49	8.93	31.76	-0.14	21.72	43.50	21.7	Vert.	100	302	BC		
12	292.440	37.40	13.50	6.34	31.67	0.00	25.57	46.00	20.4	Vert.	100	229	LP		
13	389.920	35.30	15.41	6.96	31.63	0.00	26.04	46.00	19.9	Vert.	100	4	LP		
14	783.360	22.60	20.62	8.96	31.40	0.00	20.78	46.00	25.2	Vert.	100	208	LP		

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber

Date : 2021/02/01

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A

Mode : FM Reception Digital (107.9 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< QP DATA >>

No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]					<QP> [dBuV/m]	<QP> [dB]						
1	107.680	27.90	11.55	8.03	31.85	-0.09	15.54	43.50	27.9	Hori.	296	38	BC	
2	108.120	27.80	11.61	8.04	31.85	-0.10	15.50	43.50	28.0	Hori.	291	34	BC	
3	215.360	35.50	11.18	5.77	31.74	0.00	20.71	43.50	22.7	Hori.	225	191	LP	
4	216.240	35.70	11.17	5.78	31.74	0.00	20.91	46.00	25.0	Hori.	153	193	LP	
5	324.360	42.60	14.30	6.57	31.65	0.00	31.82	46.00	14.1	Hori.	100	216	LP	
6	432.480	32.90	16.09	7.25	31.63	0.00	24.61	46.00	21.3	Hori.	100	135	LP	
7	756.840	22.40	20.14	8.86	31.42	0.00	19.98	46.00	26.0	Hori.	100	295	LP	
8	107.680	29.50	11.55	8.03	31.85	-0.09	17.14	43.50	26.3	Vert.	100	175	BC	
9	108.120	28.20	11.61	8.04	31.85	-0.10	15.90	43.50	27.6	Vert.	100	190	BC	
10	215.360	34.10	11.18	5.77	31.74	0.00	19.31	43.50	24.1	Vert.	100	63	LP	
11	216.240	33.40	11.17	5.78	31.74	0.00	18.61	46.00	27.3	Vert.	100	57	LP	
12	324.360	35.00	14.30	6.57	31.65	0.00	24.22	46.00	21.7	Vert.	100	68	LP	
13	648.720	23.80	19.19	8.33	31.62	0.00	19.70	46.00	26.3	Vert.	100	233	LP	
14	753.760	22.70	20.12	8.85	31.43	0.00	20.24	46.00	25.7	Vert.	100	194	LP	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

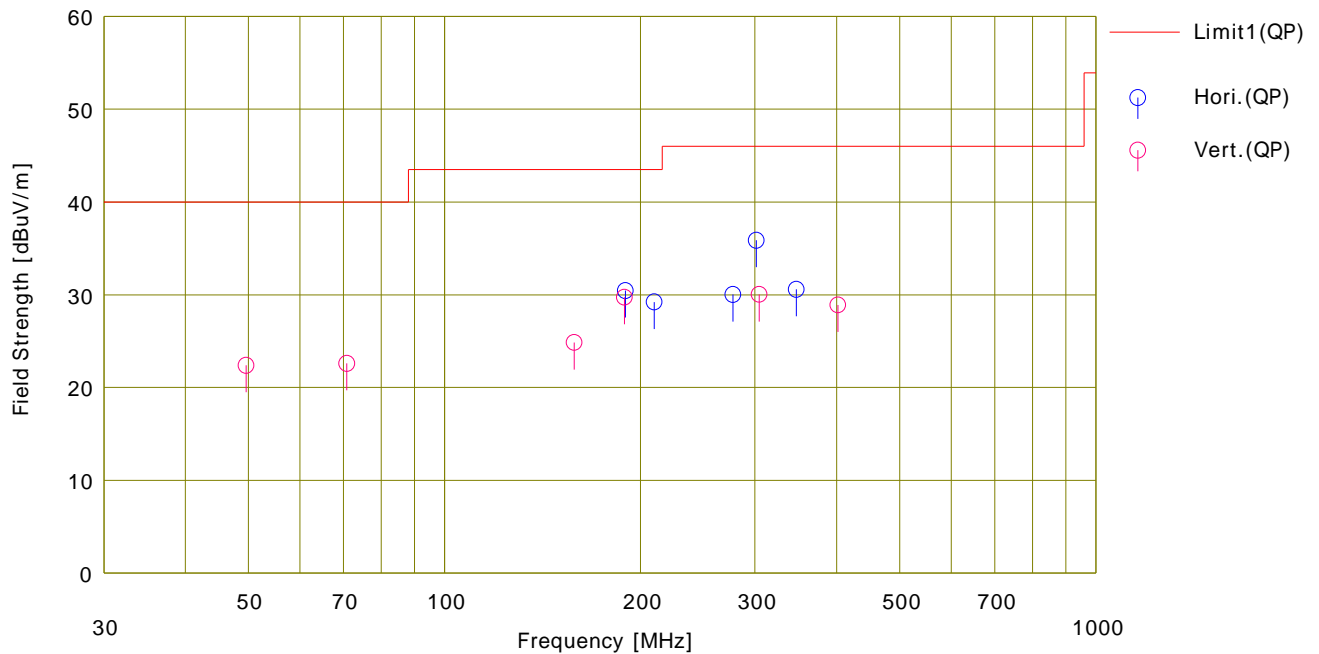
UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/01

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Other, Port A

Mode : FM Reception Digital (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki



No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]					<QP> [dBuV/m]	<QP> [dB]	<QP> [dB]					
1	189.705	37.10	16.35	8.87	31.77	-0.12	30.43	43.50	13.0	Hori.	169	170	BC	
2	210.006	44.00	11.24	5.73	31.75	0.00	29.22	43.50	14.2	Hori.	176	151	LP	
3	277.318	42.30	13.17	6.23	31.68	0.00	30.02	46.00	15.9	Hori.	166	288	LP	
4	301.211	47.50	13.62	6.41	31.67	0.00	35.86	46.00	10.1	Hori.	148	203	LP	
5	346.955	40.50	14.99	6.72	31.64	0.00	30.57	46.00	15.4	Hori.	100	201	LP	
6	49.635	35.70	11.33	7.27	31.89	-0.03	22.38	40.00	17.6	Vert.	100	235	BC	
7	70.878	40.60	6.48	7.56	31.88	-0.18	22.58	40.00	17.4	Vert.	100	222	BC	
8	158.168	32.80	15.14	8.58	31.79	0.12	24.85	43.50	18.6	Vert.	100	212	BC	
9	188.944	36.40	16.33	8.87	31.77	-0.11	29.72	43.50	13.7	Vert.	100	7	BC	
10	304.153	41.60	13.67	6.43	31.67	0.00	30.03	46.00	15.9	Vert.	100	232	LP	
11	402.115	37.80	15.70	7.03	31.63	0.00	28.90	46.00	17.1	Vert.	100	20	LP	

Calculation: Result [dBuV/m] = Reading [dBuV] + Ant.Fac [dB/m] + Loss (Cable+ATT) [dB] - Gain (AMP) [dB] + S.Fac ( AF) [dB]  
 Ant.Type=BC: Biconical Antenna LP: Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/01/31

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A

Mode : FM Reception Analog (87.75 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 25 deg.C / 32 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa

<< QP DATA >>

No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]					<QP> [dBuV/m]	<QP> [dB]	<QP> [dBuV/m]					
1	87.530	24.30	7.79	7.78	31.87	0.39	8.39	40.00	31.6	Hori.	374	127	BC	
2	87.970	24.20	7.87	7.79	31.87	0.38	8.37	40.00	31.6	Hori.	354	121	BC	
3	175.060	26.70	15.78	8.74	31.78	0.00	19.44	43.50	24.0	Hori.	186	203	BC	
4	175.940	27.40	15.88	8.74	31.78	-0.01	20.23	43.50	23.2	Hori.	194	200	BC	
5	263.910	41.70	12.41	6.14	31.69	0.00	28.56	46.00	17.4	Hori.	163	278	LP	
6	615.790	25.70	19.38	8.18	31.61	0.00	21.65	46.00	24.3	Hori.	100	193	LP	
7	879.700	21.70	22.11	9.38	30.95	0.00	22.24	46.00	23.7	Hori.	100	183	LP	
8	87.530	28.30	7.79	7.78	31.87	0.39	12.39	40.00	27.6	Vert.	100	203	BC	
9	87.970	28.50	7.87	7.79	31.87	0.38	12.67	40.00	27.3	Vert.	100	193	BC	
10	175.060	26.60	15.78	8.74	31.78	0.00	19.34	43.50	24.1	Vert.	100	183	BC	
11	175.940	27.10	15.88	8.74	31.78	-0.01	19.93	43.50	23.5	Vert.	100	218	BC	
12	263.910	32.30	12.41	6.14	31.69	0.00	19.16	46.00	26.8	Vert.	100	228	LP	
13	527.820	28.70	17.61	7.74	31.64	0.00	22.41	46.00	23.5	Vert.	100	233	LP	
14	791.730	25.40	20.78	9.00	31.39	0.00	23.79	46.00	22.2	Vert.	100	88	LP	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/01/31

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A

Mode : FM Reception Analog (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 25 deg.C / 32 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa

<< QP DATA >>

No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]					<QP> [dBuV/m]	<QP> [dB]	<QP> [dB]					
1	97.480	30.70	9.77	7.92	31.86	0.14	16.67	43.50	26.8	Hori.	320	85	BC	
2	97.920	31.10	9.85	7.92	31.86	0.12	17.13	43.50	26.3	Hori.	328	86	BC	
3	194.960	31.10	16.50	8.92	31.76	-0.14	24.62	43.50	18.8	Hori.	178	208	BC	
4	195.840	31.10	16.49	8.93	31.76	-0.14	24.62	43.50	18.8	Hori.	164	206	BC	
5	292.440	44.40	13.50	6.34	31.67	0.00	32.57	46.00	13.4	Hori.	140	206	LP	
6	389.920	36.30	15.41	6.96	31.63	0.00	27.04	46.00	18.9	Hori.	116	89	LP	
7	682.360	22.80	19.60	8.49	31.58	0.00	19.31	46.00	26.6	Hori.	170	238	LP	
8	97.480	35.00	9.77	7.92	31.86	0.14	20.97	43.50	22.5	Vert.	100	208	BC	
9	97.920	35.40	9.85	7.92	31.86	0.12	21.43	43.50	22.0	Vert.	100	190	BC	
10	194.960	32.80	16.50	8.92	31.76	-0.14	26.32	43.50	17.1	Vert.	100	293	BC	
11	195.840	31.10	16.49	8.93	31.76	-0.14	24.62	43.50	18.8	Vert.	100	285	BC	
12	292.440	37.40	13.50	6.34	31.67	0.00	25.57	46.00	20.4	Vert.	112	5	LP	
13	389.920	37.60	15.41	6.96	31.63	0.00	28.34	46.00	17.6	Vert.	100	234	LP	
14	877.320	21.70	22.09	9.37	30.96	0.00	22.20	46.00	23.8	Vert.	100	219	LP	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber

Date : 2021/01/31

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A

Mode : FM Reception Analog (107.9 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 25 deg.C / 32 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa

<< QP DATA >>

No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP>					<QP>	<QP>						
		[dBuV]					[dBuV/m]	[dB]						
1	107.680	26.30	11.55	8.03	31.85	-0.09	13.94	43.50	29.5	Hori.	291	184	BC	
2	108.120	27.10	11.61	8.04	31.85	-0.10	14.80	43.50	28.7	Hori.	280	184	BC	
3	215.360	36.70	11.18	5.77	31.74	0.00	21.91	43.50	21.5	Hori.	224	128	LP	
4	216.240	38.20	11.17	5.78	31.74	0.00	23.41	46.00	22.5	Hori.	225	131	LP	
5	324.360	43.30	14.30	6.57	31.65	0.00	32.52	46.00	13.4	Hori.	100	212	LP	
6	540.600	25.60	17.70	7.82	31.66	0.00	19.46	46.00	26.5	Hori.	161	244	LP	
7	864.960	21.60	21.91	9.32	31.01	0.00	21.82	46.00	24.1	Hori.	132	102	LP	
8	107.680	28.30	11.55	8.03	31.85	-0.09	15.94	43.50	27.5	Vert.	100	159	BC	
9	108.120	27.80	11.61	8.04	31.85	-0.10	15.50	43.50	28.0	Vert.	100	168	BC	
10	215.360	37.20	11.18	5.77	31.74	0.00	22.41	43.50	21.0	Vert.	100	58	LP	
11	216.240	36.50	11.17	5.78	31.74	0.00	21.71	46.00	24.2	Vert.	100	61	LP	
12	432.480	33.10	16.09	7.25	31.63	0.00	24.81	46.00	21.1	Vert.	100	254	LP	
13	648.720	24.10	19.19	8.33	31.62	0.00	20.00	46.00	26.0	Vert.	100	245	LP	
14	756.840	23.30	20.14	8.86	31.42	0.00	20.88	46.00	25.1	Vert.	100	344	LP	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber

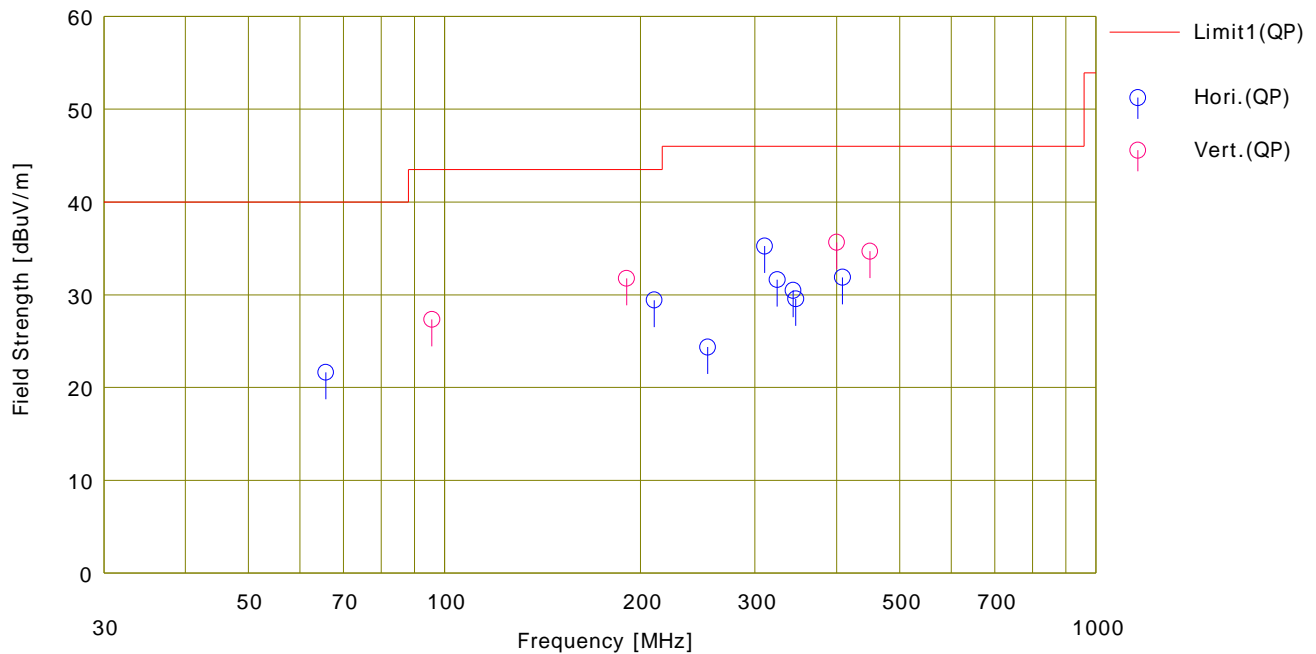
Date : 2021/01/31

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Other, Port A

Mode : FM Reception Analog (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 25 deg.C / 32 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa



No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]					<QP> [dBuV/m]	<QP> [dBuV/m]	<QP> [dB]					
1	65.784	39.40	7.08	7.49	31.88	-0.45	21.64	40.00	18.3	Hori.	284	152	BC	
2	210.011	44.20	11.24	5.73	31.75	0.00	29.42	43.50	14.0	Hori.	158	160	LP	
3	253.694	38.10	11.89	6.07	31.70	0.00	24.36	46.00	21.6	Hori.	126	329	LP	
4	310.300	46.60	13.83	6.47	31.66	0.00	35.24	46.00	10.7	Hori.	109	214	LP	
5	324.453	42.40	14.31	6.57	31.65	0.00	31.63	46.00	14.3	Hori.	100	155	LP	
6	343.202	40.50	14.92	6.69	31.64	0.00	30.47	46.00	15.5	Hori.	100	34	LP	
7	346.302	39.50	14.98	6.71	31.64	0.00	29.55	46.00	16.4	Hori.	123	29	LP	
8	408.673	40.60	15.82	7.08	31.63	0.00	31.87	46.00	14.1	Hori.	100	242	LP	
9	95.696	41.70	9.42	7.89	31.86	0.19	27.34	43.50	16.1	Vert.	100	189	BC	
10	190.385	38.40	16.36	8.88	31.77	-0.12	31.75	43.50	11.7	Vert.	100	282	BC	
11	400.001	44.60	15.65	7.02	31.63	0.00	35.64	46.00	10.3	Vert.	100	182	LP	
12	450.010	42.50	16.44	7.38	31.63	0.00	34.69	46.00	11.3	Vert.	100	213	LP	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna



# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/01/31

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port B

Mode : FM Reception Analog (87.75 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 25 deg.C / 32 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa

<< QP DATA >>

No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP>					<QP>	<QP>						
		[dBuV]					[dBuV/m]	[dB]						
1	87.530	25.50	7.79	7.78	31.87	0.39	9.59	40.00	30.4	Hori.	348	107	BC	
2	87.970	26.20	7.87	7.79	31.87	0.38	10.37	40.00	29.6	Hori.	312	112	BC	
3	175.060	27.90	15.78	8.74	31.78	0.00	20.64	43.50	22.8	Hori.	185	210	BC	
4	175.940	26.70	15.88	8.74	31.78	-0.01	19.53	43.50	23.9	Hori.	178	212	BC	
5	263.910	41.30	12.41	6.14	31.69	0.00	28.16	46.00	17.8	Hori.	182	280	LP	
6	527.820	26.50	17.61	7.74	31.64	0.00	20.21	46.00	25.7	Hori.	100	1	LP	
7	615.790	25.50	19.38	8.18	31.61	0.00	21.45	46.00	24.5	Hori.	100	358	LP	
8	87.530	30.60	7.79	7.78	31.87	0.39	14.69	40.00	25.3	Vert.	127	166	BC	
9	87.970	31.40	7.87	7.79	31.87	0.38	15.57	40.00	24.4	Vert.	131	172	BC	
10	175.060	27.50	15.78	8.74	31.78	0.00	20.24	43.50	23.2	Vert.	100	231	BC	
11	175.940	26.10	15.88	8.74	31.78	-0.01	18.93	43.50	24.5	Vert.	100	222	BC	
12	263.910	35.80	12.41	6.14	31.69	0.00	22.66	46.00	23.3	Vert.	100	102	LP	
13	525.180	32.00	17.62	7.73	31.63	0.00	25.72	46.00	20.2	Vert.	100	214	LP	
14	791.730	32.30	20.78	9.00	31.39	0.00	30.69	46.00	15.3	Vert.	100	73	LP	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/01/31

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port B

Mode : FM Reception Analog (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 25 deg.C / 32 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa

<< QP DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP>	<QP>					<QP>	<QP>	<QP>					
		[dBuV/m]	[dBuV/m]					[dB]	[dBuV/m]	[dB]					
1	97.480	30.20	9.77	7.92	31.86	0.14	16.17	43.50	27.3	Hori.	335	79	BC		
2	97.920	30.40	9.85	7.92	31.86	0.12	16.43	43.50	27.0	Hori.	328	80	BC		
3	194.960	30.40	16.50	8.92	31.76	-0.14	23.92	43.50	19.5	Hori.	172	220	BC		
4	195.840	29.70	16.49	8.93	31.76	-0.14	23.22	43.50	20.2	Hori.	165	226	BC		
5	292.440	44.60	13.50	6.34	31.67	0.00	32.77	46.00	13.2	Hori.	117	160	LP		
6	389.920	36.50	15.41	6.96	31.63	0.00	27.24	46.00	18.7	Hori.	100	178	LP		
7	682.360	22.10	19.60	8.49	31.58	0.00	18.61	46.00	27.3	Hori.	100	263	LP		
8	97.480	35.20	9.77	7.92	31.86	0.14	21.17	43.50	22.3	Vert.	100	193	BC		
9	97.920	35.20	9.85	7.92	31.86	0.12	21.23	43.50	22.2	Vert.	100	208	BC		
10	194.960	29.40	16.50	8.92	31.76	-0.14	22.92	43.50	20.5	Vert.	100	281	BC		
11	195.840	28.50	16.49	8.93	31.76	-0.14	22.02	43.50	21.4	Vert.	100	269	BC		
12	293.760	37.90	13.53	6.35	31.67	0.00	26.11	46.00	19.8	Vert.	100	15	LP		
13	389.920	34.90	15.41	6.96	31.63	0.00	25.64	46.00	20.3	Vert.	100	203	LP		
14	881.280	21.80	22.11	9.39	30.95	0.00	22.35	46.00	23.6	Vert.	100	201	LP		

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber

Date : 2021/01/31

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port B

Mode : FM Reception Analog (107.9 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 25 deg.C / 32 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa

<< QP DATA >>

No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]					<QP> [dBuV/m]	<QP> [dB]	<QP> [dBuV/m]					
1	107.680	26.70	11.55	8.03	31.85	-0.09	14.34	43.50	29.1	Hori.	298	202	BC	
2	108.120	26.30	11.61	8.04	31.85	-0.10	14.00	43.50	29.5	Hori.	294	179	BC	
3	215.360	36.80	11.18	5.77	31.74	0.00	22.01	43.50	21.4	Hori.	153	144	LP	
4	216.240	37.20	11.17	5.78	31.74	0.00	22.41	46.00	23.5	Hori.	158	150	LP	
5	324.360	42.00	14.30	6.57	31.65	0.00	31.22	46.00	14.7	Hori.	100	23	LP	
6	648.720	23.20	19.19	8.33	31.62	0.00	19.10	46.00	26.9	Hori.	100	38	LP	
7	973.080	22.10	22.35	9.79	30.29	0.00	23.95	53.90	29.9	Hori.	100	201	LP	
8	107.680	29.70	11.55	8.03	31.85	-0.09	17.34	43.50	26.1	Vert.	100	177	BC	
9	108.120	28.80	11.61	8.04	31.85	-0.10	16.50	43.50	27.0	Vert.	100	195	BC	
10	215.360	34.70	11.18	5.77	31.74	0.00	19.91	43.50	23.5	Vert.	100	322	LP	
11	216.240	34.70	11.17	5.78	31.74	0.00	19.91	46.00	26.0	Vert.	100	317	LP	
12	324.360	37.00	14.30	6.57	31.65	0.00	26.22	46.00	19.7	Vert.	100	210	LP	
13	432.480	32.30	16.09	7.25	31.63	0.00	24.01	46.00	21.9	Vert.	112	203	LP	
14	756.840	22.80	20.14	8.86	31.42	0.00	20.38	46.00	25.6	Vert.	100	188	LP	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+S.Fac( AF)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber

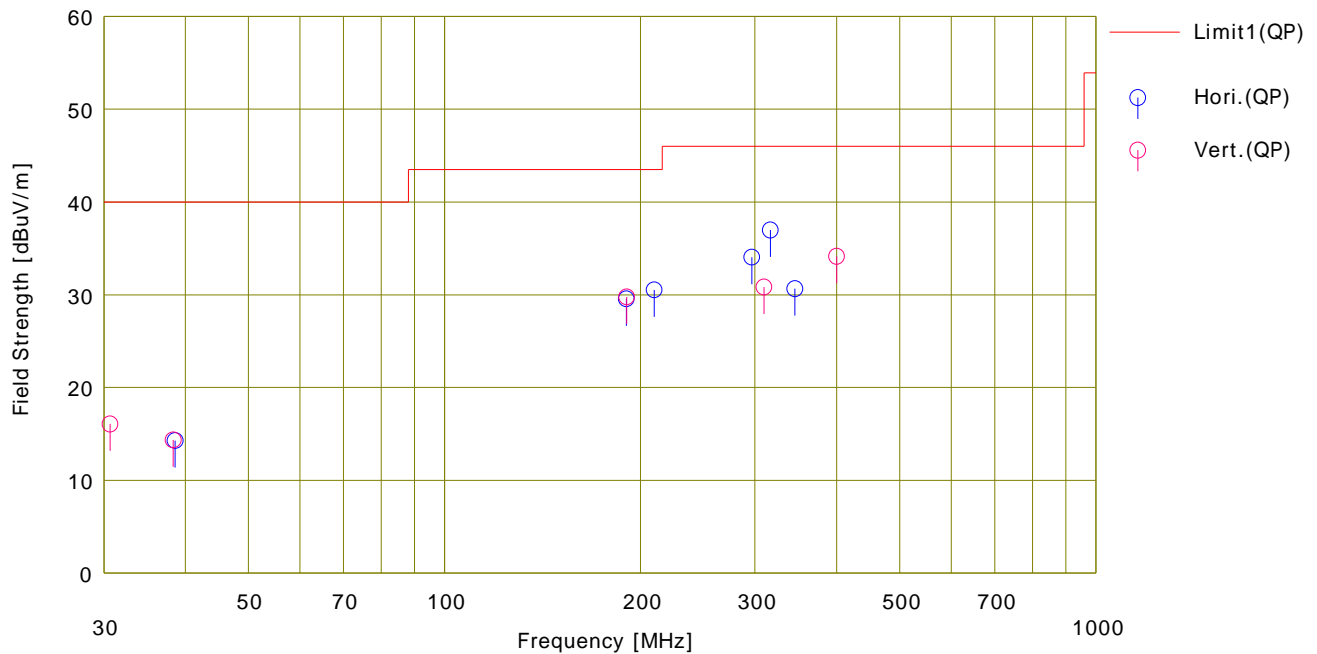
Date : 2021/01/31

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Other, Port B

Mode : FM Reception Analog (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 25 deg.C / 32 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa



No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	S.Fac [dB]	Result	Limit	Margin	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]					<QP> [dBuV/m]	<QP> [dB]						
1	38.606	23.70	15.45	7.09	31.90	-0.07	14.27	40.00	25.7	Hori.	400	76	BC	
2	190.182	36.20	16.36	8.88	31.77	-0.12	29.55	43.50	13.9	Hori.	170	214	BC	
3	210.010	45.30	11.24	5.73	31.75	0.00	30.52	43.50	12.9	Hori.	158	161	LP	
4	296.365	45.80	13.55	6.36	31.67	0.00	34.04	46.00	11.9	Hori.	157	279	LP	
5	316.600	48.10	14.02	6.51	31.66	0.00	36.97	46.00	9.0	Hori.	106	287	LP	
6	345.601	40.60	14.97	6.71	31.64	0.00	30.64	46.00	15.3	Hori.	100	251	LP	
7	30.680	22.60	18.52	6.95	31.90	-0.12	16.05	40.00	23.9	Vert.	100	6	BC	
8	38.356	23.70	15.54	7.08	31.90	-0.07	14.35	40.00	25.6	Vert.	100	148	BC	
9	190.454	36.40	16.36	8.88	31.77	-0.12	29.75	43.50	13.7	Vert.	100	293	BC	
10	309.598	42.20	13.81	6.47	31.66	0.00	30.82	46.00	15.1	Vert.	100	218	LP	
11	400.001	43.10	15.65	7.02	31.63	0.00	34.14	46.00	11.8	Vert.	100	210	LP	

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/02

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A, Distance = 307 cm

Mode : FM Reception Digital (87.75 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1847.370	35.70	48.01	25.88	3.65	38.95	0.21	26.49	38.80	53.90	73.90	27.4	35.1	Hori.	100	72	31SH2	
2	2199.250	35.49	48.42	28.54	4.00	38.80	0.21	29.44	42.37	53.90	73.90	24.4	31.5	Hori.	113	75	31SH2	
3	3516.400	55.82	57.73	29.32	5.11	38.17	0.21	52.29	54.20	53.90	73.90	1.6	19.7	Hori.	162	151	31SH2	
4	5190.230	36.75	50.10	32.23	6.30	38.65	0.21	36.84	50.19	53.90	73.90	17.0	23.7	Hori.	100	134	31SH2	
5	1847.370	35.77	50.32	25.88	3.65	38.95	0.21	26.56	41.11	53.90	73.90	27.3	32.7	Vert.	100	207	31SH2	
6	2199.250	35.79	49.22	28.54	4.00	38.80	0.21	29.74	43.17	53.90	73.90	24.1	30.7	Vert.	121	165	31SH2	
7	3516.400	56.40	58.73	29.32	5.11	38.17	0.21	52.87	55.20	53.90	73.90	1.0	18.7	Vert.	100	142	31SH2	
8	5190.230	36.31	49.06	32.23	6.30	38.65	0.21	36.40	49.15	53.90	73.90	17.5	24.7	Vert.	100	148	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/03

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A, Distance = 307 cm

Mode : FM Reception Digital (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]					
1	1852.120	32.54	46.48	25.90	3.66	38.95	0.21	23.36	37.30	53.90	73.90	30.5	36.6	Hori.	142	350	31SH2	
2	1949.600	33.96	48.38	26.29	3.76	38.93	0.21	25.29	39.71	53.90	73.90	28.6	34.1	Hori.	199	127	31SH2	
3	2144.560	43.94	50.17	28.06	3.95	38.83	0.21	37.33	43.56	53.90	73.90	16.5	30.3	Hori.	177	357	31SH2	
4	3119.160	54.17	57.31	29.37	4.79	38.37	0.21	50.17	53.31	53.90	73.90	3.7	20.5	Hori.	139	175	31SH2	
5	1852.120	32.02	46.53	25.90	3.66	38.95	0.21	22.84	37.35	53.90	73.90	31.0	36.5	Vert.	100	123	31SH2	
6	1949.600	34.00	48.21	26.29	3.76	38.93	0.21	25.33	39.54	53.90	73.90	28.5	34.3	Vert.	206	162	31SH2	
7	2144.560	45.01	50.71	28.06	3.95	38.83	0.21	38.40	44.10	53.90	73.90	15.5	29.8	Vert.	146	4	31SH2	
8	3119.160	54.41	57.08	29.37	4.79	38.37	0.21	50.41	53.08	53.90	73.90	3.4	20.8	Vert.	100	195	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/02

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A, Distance = 307 cm

Mode : FM Reception Digital (107.9 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1399.840	36.18	49.69	25.65	3.16	39.00	0.21	26.20	39.71	53.90	73.90	27.7	34.1	Hori.	207	175	31SH2	
2	2703.000	36.13	49.54	28.39	4.45	38.54	0.21	30.64	44.05	53.90	73.90	23.2	29.8	Hori.	195	256	31SH2	
3	3459.840	55.07	57.05	29.00	5.08	38.19	0.21	51.17	53.15	53.90	73.90	2.7	20.7	Hori.	239	212	31SH2	
4	4324.800	34.39	47.54	30.59	5.69	38.41	0.21	32.47	45.62	53.90	73.90	21.4	28.2	Hori.	100	358	31SH2	
5	1399.840	36.01	48.33	25.65	3.16	39.00	0.21	26.03	38.35	53.90	73.90	27.8	35.5	Vert.	100	68	31SH2	
6	2703.000	35.76	47.73	28.39	4.45	38.54	0.21	30.27	42.24	53.90	73.90	23.6	31.6	Vert.	100	124	31SH2	
7	3459.840	56.54	59.61	29.00	5.08	38.19	0.21	52.64	55.71	53.90	73.90	1.2	18.1	Vert.	100	148	31SH2	
8	4324.800	34.39	47.32	30.59	5.69	38.41	0.21	32.47	45.40	53.90	73.90	21.4	28.5	Vert.	100	11	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

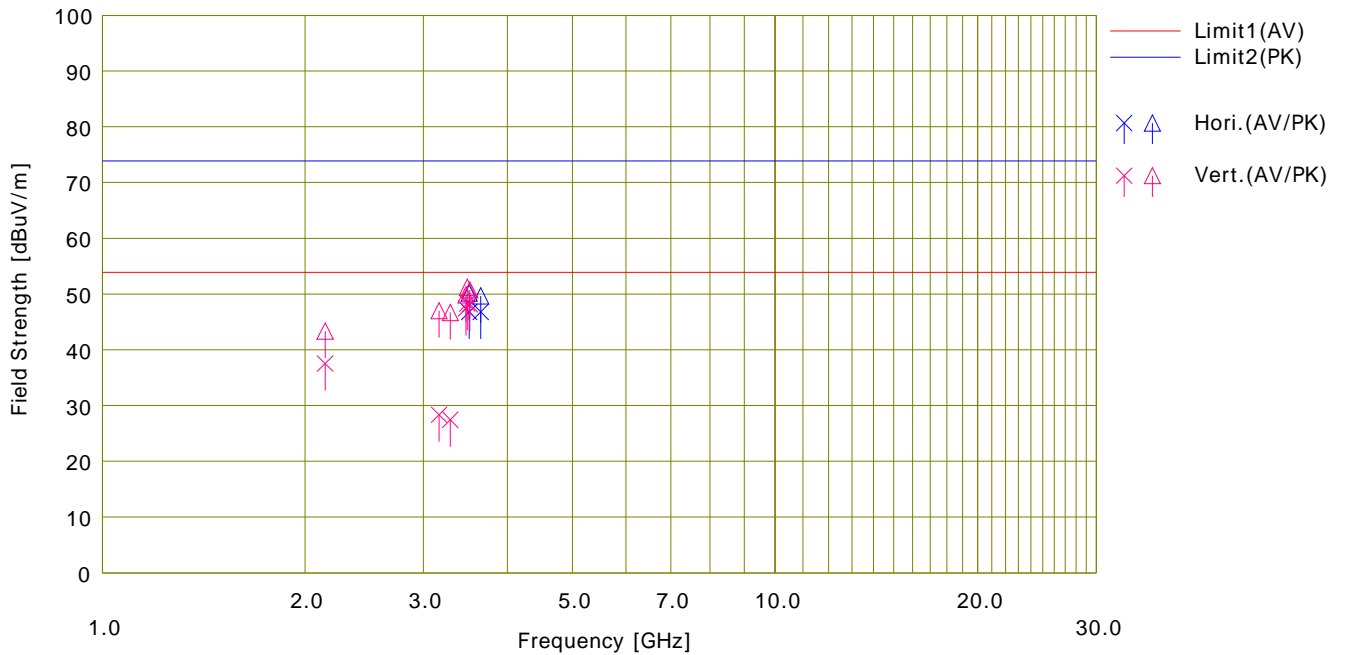
# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/03

Company : DENSO Corporation	Mode : FM Reception Digital (97.7 MHz)
Kind of EUT : Cockpit Control Unit	Order No. : 13692701S
Model No. : DNNS122	Power : DC 13.2 V
Serial No. : CP1.5-K3-GZ1-US-High-064	Temp./Humi. : 20 deg.C / 27 %RH
Remarks : Other, Port A, Distance = (1-10 GHz) 307 cm, (10-30 GHz) 100 cm	

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa



No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>							
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dB]	[dB]							
1	3509.560	50.34	53.77	29.28	5.11	38.17	0.21	46.77	50.20	53.90	73.90	7.1	23.7	Hori.	100	207	31SH2	
2	3650.000	49.73	52.60	29.80	5.21	38.16	0.21	46.79	49.66	53.90	73.90	7.1	24.2	Hori.	100	142	31SH2	
3	2143.240	44.14	49.97	28.05	3.95	38.83	0.21	37.52	43.35	53.90	73.90	16.3	30.5	Vert.	158	342	31SH2	
4	3167.200	32.25	50.92	29.38	4.83	38.34	0.21	28.33	47.00	53.90	73.90	25.5	26.9	Vert.	100	151	31SH2	
5	3289.680	31.67	50.89	28.93	4.93	38.28	0.21	27.46	46.68	53.90	73.90	26.4	27.2	Vert.	100	214	31SH2	
6	3473.200	51.22	53.66	29.08	5.08	38.18	0.21	47.41	49.85	53.90	73.90	6.4	24.0	Vert.	121	154	31SH2	
7	3487.910	52.08	54.93	29.16	5.09	38.18	0.21	48.36	51.21	53.90	73.90	5.5	22.6	Vert.	177	172	31SH2	
8	3515.568	51.71	54.27	29.31	5.11	38.17	0.21	48.17	50.73	53.90	73.90	5.7	23.1	Vert.	119	179	31SH2	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna



# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/02

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A, Distance = 307 cm

Mode : FM Reception Analog (87.75 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1847.370	35.81	46.82	25.88	3.65	38.95	0.21	26.60	37.61	53.90	73.90	27.3	36.2	Hori.	195	181	31SH2	
2	2199.250	37.84	47.42	28.54	4.00	38.80	0.21	31.79	41.37	53.90	73.90	22.1	32.5	Hori.	188	203	31SH2	
3	3518.800	56.01	58.03	29.33	5.11	38.17	0.21	52.49	54.51	53.90	73.90	1.4	19.3	Hori.	256	219	31SH2	
4	5190.230	36.41	50.23	32.23	6.30	38.65	0.21	36.50	50.32	53.90	73.90	17.4	23.5	Hori.	100	134	31SH2	
5	1847.370	39.77	49.16	25.88	3.65	38.95	0.21	30.56	39.95	53.90	73.90	23.3	33.9	Vert.	166	9	31SH2	
6	2199.250	39.30	49.30	28.54	4.00	38.80	0.21	33.25	43.25	53.90	73.90	20.6	30.6	Vert.	182	7	31SH2	
7	3518.800	56.69	58.36	29.33	5.11	38.17	0.21	53.17	54.84	53.90	73.90	0.7	19.0	Vert.	100	149	31SH2	
8	5190.230	36.87	49.68	32.23	6.30	38.65	0.21	36.96	49.77	53.90	73.90	16.9	24.1	Vert.	189	151	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/02

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A, Distance = 307 cm

Mode : FM Reception Analog (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1852.120	36.32	48.14	25.90	3.66	38.95	0.21	27.14	38.96	53.90	73.90	26.7	34.9	Hori.	136	88	31SH2	
2	1949.600	40.43	48.96	26.29	3.76	38.93	0.21	31.76	40.29	53.90	73.90	22.1	33.6	Hori.	226	140	31SH2	
3	2252.160	41.40	47.37	28.74	4.06	38.76	0.21	35.65	41.62	53.90	73.90	18.2	32.2	Hori.	205	169	31SH2	
4	3119.160	54.10	56.11	29.37	4.79	38.37	0.21	50.10	52.11	53.90	73.90	3.8	21.7	Hori.	100	187	31SH2	
5	1852.120	39.64	49.46	25.90	3.66	38.95	0.21	30.46	40.28	53.90	73.90	23.4	33.6	Vert.	155	21	31SH2	
6	1949.600	42.08	50.19	26.29	3.76	38.93	0.21	33.41	41.52	53.90	73.90	20.4	32.3	Vert.	100	336	31SH2	
7	2252.160	40.04	48.08	28.74	4.06	38.76	0.21	34.29	42.33	53.90	73.90	19.6	31.5	Vert.	303	173	31SH2	
8	3119.160	54.46	56.67	29.37	4.79	38.37	0.21	50.46	52.67	53.90	73.90	3.4	21.2	Vert.	100	155	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/02

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port A, Distance = 307 cm

Mode : FM Reception Analog (107.9 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1399.840	36.65	48.78	25.65	3.16	39.00	0.21	26.67	38.80	53.90	73.90	27.2	35.1	Hori.	209	205	31SH2	
2	2703.000	36.15	48.73	28.39	4.45	38.54	0.21	30.66	43.24	53.90	73.90	23.2	30.6	Hori.	100	109	31SH2	
3	3459.840	54.84	58.42	29.00	5.08	38.19	0.21	50.94	54.52	53.90	73.90	2.9	19.3	Hori.	100	216	31SH2	
4	4324.800	34.39	47.23	30.59	5.69	38.41	0.21	32.47	45.31	53.90	73.90	21.4	28.5	Hori.	100	355	31SH2	
5	1399.840	38.19	48.61	25.65	3.16	39.00	0.21	28.21	38.63	53.90	73.90	25.6	35.2	Vert.	188	5	31SH2	
6	2703.000	39.68	50.47	28.39	4.45	38.54	0.21	34.19	44.98	53.90	73.90	19.7	28.9	Vert.	255	355	31SH2	
7	3459.840	56.72	59.35	29.00	5.08	38.19	0.21	52.82	55.45	53.90	73.90	1.0	18.4	Vert.	100	150	31SH2	
8	4324.800	32.61	45.20	30.59	5.69	38.41	0.21	30.69	43.28	53.90	73.90	23.2	30.6	Vert.	100	178	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

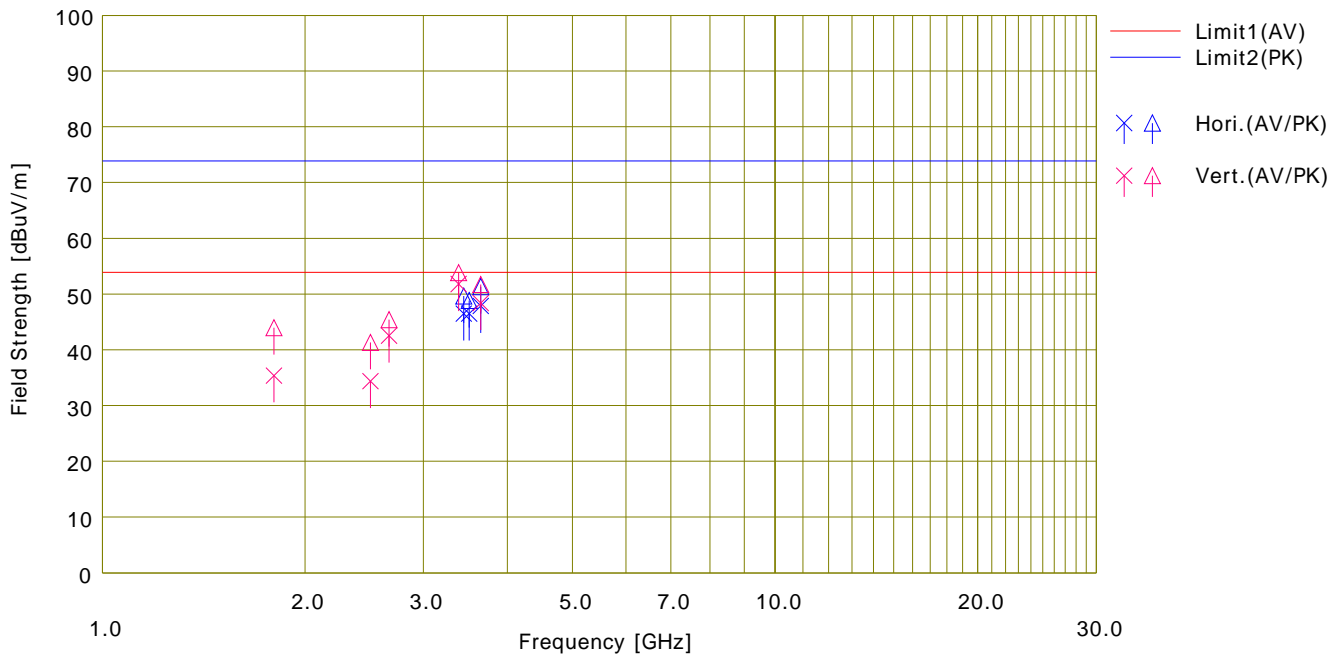
UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber

Date : 2021/02/03

Company : DENSO Corporation	Mode : FM Reception Analog (97.7 MHz)
Kind of EUT : Cockpit Control Unit	Order No. : 13692701S
Model No. : DNNS122	Power : DC 13.2 V
Serial No. : CP1.5-K3-GZ1-US-High-064	Temp./Humi. : 20 deg.C / 27 %RH
Remarks : Other, Port A, Distance = (1-10 GHz) 307 cm, (10-30 GHz) 100 cm	

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yohsuke Matsuzawa



No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>							
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dB]	[dB]							
1	3446.060	50.49	53.64	28.93	5.06	38.20	0.21	46.49	49.64	53.90	73.90	7.4	24.2	Hori.	132	208	31SH2	
2	3509.611	50.06	52.41	29.28	5.11	38.17	0.21	46.49	48.84	53.90	73.90	7.4	25.0	Hori.	107	198	31SH2	
3	3649.988	50.79	54.26	29.80	5.21	38.16	0.21	47.85	51.32	53.90	73.90	6.0	22.5	Hori.	151	143	31SH2	
4	1799.960	44.76	53.32	25.77	3.61	38.96	0.21	35.39	43.95	53.90	73.90	18.5	29.9	Vert.	125	328	31SH2	
5	2502.680	40.12	47.06	28.37	4.28	38.61	0.21	34.37	41.31	53.90	73.90	19.5	32.5	Vert.	103	182	31SH2	
6	2667.480	48.13	51.03	28.33	4.42	38.55	0.21	42.54	45.44	53.90	73.90	11.3	28.4	Vert.	233	4	31SH2	
7	3386.920	56.04	58.07	28.76	5.01	38.23	0.21	51.79	53.82	53.90	73.90	2.1	20.0	Vert.	130	189	31SH2	
8	3650.002	51.31	54.66	29.80	5.21	38.16	0.21	48.37	51.72	53.90	73.90	5.5	22.1	Vert.	270	183	31SH2	

Calculation: Result[dBuV/m] = Reading[dBuV] + Ant.Fac[dB/m] + Loss(Cable)[dB] + D.Fac[dB] - Gain(AMP)[dB]

Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber

Date : 2021/02/01

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port B, Distance = 307 cm

Mode : FM Reception Analog (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1852.120	35.68	46.22	25.90	3.66	38.95	0.21	26.50	37.04	53.90	73.90	27.4	36.8	Hori.	192	202	31SH2	
2	1949.600	39.94	48.07	26.29	3.76	38.93	0.21	31.27	39.40	53.90	73.90	22.6	34.5	Hori.	166	55	31SH2	
3	2252.160	46.43	52.14	28.74	4.06	38.76	0.21	40.68	46.39	53.90	73.90	13.2	27.5	Hori.	209	168	31SH2	
4	3119.360	48.17	51.96	29.37	4.79	38.37	0.21	44.17	47.96	53.90	73.90	9.7	25.9	Hori.	191	200	31SH2	
5	1852.120	39.68	48.98	25.90	3.66	38.95	0.21	30.50	39.80	53.90	73.90	23.4	34.1	Vert.	192	13	31SH2	
6	1949.600	43.93	50.46	26.29	3.76	38.93	0.21	35.26	41.79	53.90	73.90	18.6	32.1	Vert.	126	336	31SH2	
7	2252.160	38.49	48.08	28.74	4.06	38.76	0.21	32.74	42.33	53.90	73.90	21.1	31.5	Vert.	198	354	31SH2	
8	3119.360	49.92	53.52	29.37	4.79	38.37	0.21	45.92	49.52	53.90	73.90	7.9	24.3	Vert.	189	153	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber  
Date : 2021/02/01

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port B, Distance = 307 cm

Mode : FM Reception Analog (97.7 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1852.120	35.68	46.22	25.90	3.66	38.95	0.21	26.50	37.04	53.90	73.90	27.4	36.8	Hori.	192	202	31SH2	
2	1949.600	39.94	48.07	26.29	3.76	38.93	0.21	31.27	39.40	53.90	73.90	22.6	34.5	Hori.	166	55	31SH2	
3	2252.160	46.43	52.14	28.74	4.06	38.76	0.21	40.68	46.39	53.90	73.90	13.2	27.5	Hori.	209	168	31SH2	
4	3119.360	48.17	51.96	29.37	4.79	38.37	0.21	44.17	47.96	53.90	73.90	9.7	25.9	Hori.	191	200	31SH2	
5	1852.120	39.68	48.98	25.90	3.66	38.95	0.21	30.50	39.80	53.90	73.90	23.4	34.1	Vert.	192	13	31SH2	
6	1949.600	43.93	50.46	26.29	3.76	38.93	0.21	35.26	41.79	53.90	73.90	18.6	32.1	Vert.	126	336	31SH2	
7	2252.160	38.49	48.08	28.74	4.06	38.76	0.21	32.74	42.33	53.90	73.90	21.1	31.5	Vert.	198	354	31SH2	
8	3119.360	49.92	53.52	29.37	4.79	38.37	0.21	45.92	49.52	53.90	73.90	7.9	24.3	Vert.	189	153	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber

Date : 2021/02/01

Company : DENSO Corporation  
 Kind of EUT : Cockpit Control Unit  
 Model No. : DNNS122  
 Serial No. : CP1.5-K3-GZ1-US-High-064  
 Remarks : Local, Port B, Distance = 307 cm

Mode : FM Reception Analog (107.9 MHz)  
 Order No. : 13692701S  
 Power : DC 13.2 V  
 Temp./Humi. : 20 deg.C / 27 %RH

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

Engineer : Yasumasa Owaki

<< AV/PK DATA >>

No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	D.Fac [dB]	Result		Limit		Margin		Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		<AV>	<PK>					<AV>	<PK>	<AV>	<PK>	<AV>	<PK>					
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]					
1	1399.840	35.15	45.54	25.65	3.16	39.00	0.21	25.17	35.56	53.90	73.90	28.7	38.3	Hori.	119	191	31SH2	
2	2703.000	33.91	46.52	28.39	4.45	38.54	0.21	28.42	41.03	53.90	73.90	25.4	32.8	Hori.	119	154	31SH2	
3	3459.840	54.82	57.15	29.00	5.08	38.19	0.21	50.92	53.25	53.90	73.90	2.9	20.6	Hori.	100	326	31SH2	
4	4324.800	32.21	44.83	30.59	5.69	38.41	0.21	30.29	42.91	53.90	73.90	23.6	30.9	Hori.	100	348	31SH2	
5	1399.840	38.05	47.61	25.65	3.16	39.00	0.21	28.07	37.63	53.90	73.90	25.8	36.2	Vert.	359	185	31SH2	
6	2703.000	37.47	50.01	28.39	4.45	38.54	0.21	31.98	44.52	53.90	73.90	21.9	29.3	Vert.	195	170	31SH2	
7	3459.840	56.76	58.73	29.00	5.08	38.19	0.21	52.86	54.83	53.90	73.90	1.0	19.0	Vert.	100	179	31SH2	
8	4324.800	32.22	43.78	30.59	5.69	38.41	0.21	30.30	41.86	53.90	73.90	23.6	32.0	Vert.	100	356	31SH2	

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable)[dB]+D.Fac[dB]-Gain(AMP)[dB]  
 Ant.Type=BC:Biconical Antenna LP:Logperiodic Antenna \*\*SH\*: Horn Antenna

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Digital (87.75 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
8775MHz	87970	----	16.7	-13.1	----	3.6	51.7	48.1
	175940	----	17.0	-12.8	----	4.2	51.7	47.5
	263910	----	17.0	-12.7	----	4.3	51.7	47.4
	351880	----	16.6	-12.5	----	4.1	51.7	47.6
	439850	----	16.5	-12.3	----	4.2	51.7	47.5
	527820	----	16.3	-12.2	----	4.1	51.7	47.6
	615790	----	16.3	-11.9	----	4.4	51.7	47.3
	703760	----	16.4	-11.8	----	4.6	51.7	47.1
	791730	----	16.3	-11.8	----	4.5	51.7	47.2
	879700	----	16.5	-11.8	----	4.7	51.7	47.0
	967670	----	16.6	-11.9	----	4.7	51.7	47.0
	1055640	33.7	----	-12.1	21.6	----	51.7	30.1
	1495490	33.5	----	-11.8	21.7	----	51.7	30.0
	1847370	34.1	----	-11.4	22.7	----	51.7	29.0
	87530	----	16.7	-13.1	----	3.6	51.7	48.1
	175060	----	17.0	-12.8	----	4.2	51.7	47.5
	262590	----	16.7	-12.7	----	4.0	51.7	47.7
	350120	----	16.7	-12.5	----	4.2	51.7	47.5
	437650	----	16.5	-12.3	----	4.2	51.7	47.5
	525180	----	16.3	-12.2	----	4.1	51.7	47.6
	612710	----	16.3	-11.9	----	4.4	51.7	47.3
	700240	----	16.2	-11.8	----	4.4	51.7	47.3
	787770	----	16.4	-11.8	----	4.6	51.7	47.1
	875300	----	16.3	-11.8	----	4.5	51.7	47.2
	962830	----	16.6	-11.9	----	4.7	51.7	47.0
	1050360	34.8	----	-12.1	22.7	----	51.7	29.0
	1488010	34.0	----	-11.8	22.2	----	51.7	29.5
	1838130	34.0	----	-11.4	22.6	----	51.7	29.1

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]



# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Digital (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
97.7MHz	97920	----	192	-13.1	----	6.1	51.7	45.6
	195840	----	167	-12.8	----	3.9	51.7	47.8
	293760	----	166	-12.6	----	4.0	51.7	47.7
	391680	----	163	-12.5	----	3.8	51.7	47.9
	489600	----	162	-12.2	----	4.0	51.7	47.7
	587520	----	162	-12.0	----	4.2	51.7	47.5
	685440	----	163	-11.8	----	4.5	51.7	47.2
	783360	----	162	-11.8	----	4.4	51.7	47.3
	881280	----	162	-11.8	----	4.4	51.7	47.3
	979200	----	165	-11.9	----	4.6	51.7	47.1
	1077120	34.5	----	-12.0	22.5	----	51.7	29.2
	1566720	33.7	----	-11.7	22.0	----	51.7	29.7
	1860480	34.3	----	-11.4	22.9	----	51.7	28.8
	97480	----	193	-13.1	----	6.2	51.7	45.5
	194960	----	170	-12.8	----	4.2	51.7	47.5
	292440	----	166	-12.6	----	4.0	51.7	47.7
	389920	----	163	-12.5	----	3.8	51.7	47.9
	487400	----	162	-12.3	----	3.9	51.7	47.8
	584880	----	162	-12.0	----	4.2	51.7	47.5
	682360	----	163	-11.8	----	4.5	51.7	47.2
	779840	----	162	-11.8	----	4.4	51.7	47.3
877320	----	163	-11.8	----	4.5	51.7	47.2	
974800	----	166	-11.9	----	4.7	51.7	47.0	
1072280	34.5	----	-12.0	22.5	----	51.7	29.2	
1559680	33.6	----	-11.7	21.9	----	51.7	29.8	
1852120	34.5	----	-11.4	23.1	----	51.7	28.6	

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Digital (107.9 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
107.9MHz	108.120	----	17.0	-13.0	----	4.0	51.7	47.7
	216.240	----	16.6	-12.8	----	3.8	51.7	47.9
	324.360	----	17.0	-12.6	----	4.4	51.7	47.3
	432.480	----	16.4	-12.3	----	4.1	51.7	47.6
	540.600	----	16.3	-12.2	----	4.1	51.7	47.6
	648.720	----	16.2	-11.9	----	4.3	51.7	47.4
	756.840	----	16.2	-11.8	----	4.4	51.7	47.3
	864.960	----	16.3	-11.8	----	4.5	51.7	47.2
	973.080	----	16.5	-11.9	----	4.6	51.7	47.1
	1081.200	37.4	----	-12.0	25.4	----	51.7	26.3
	1729.920	38.5	----	-11.5	27.0	----	51.7	24.7
	1946.160	37.0	----	-11.3	25.7	----	51.7	26.0
	107.680	----	18.0	-13.0	----	5.0	51.7	46.7
	215.360	----	16.7	-12.8	----	3.9	51.7	47.8
	323.040	----	16.8	-12.6	----	4.2	51.7	47.5
	430.720	----	16.3	-12.4	----	3.9	51.7	47.8
	538.400	----	16.2	-12.2	----	4.0	51.7	47.7
	646.080	----	16.2	-11.9	----	4.3	51.7	47.4
	753.760	----	16.3	-11.8	----	4.5	51.7	47.2
	861.440	----	16.2	-11.8	----	4.4	51.7	47.3
969.120	----	16.5	-11.9	----	4.6	51.7	47.1	
1076.800	37.7	----	-12.0	25.7	----	51.7	26.0	
1722.880	38.8	----	-11.5	27.3	----	51.7	24.4	
1938.240	37.3	----	-11.4	25.9	----	51.7	25.8	

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

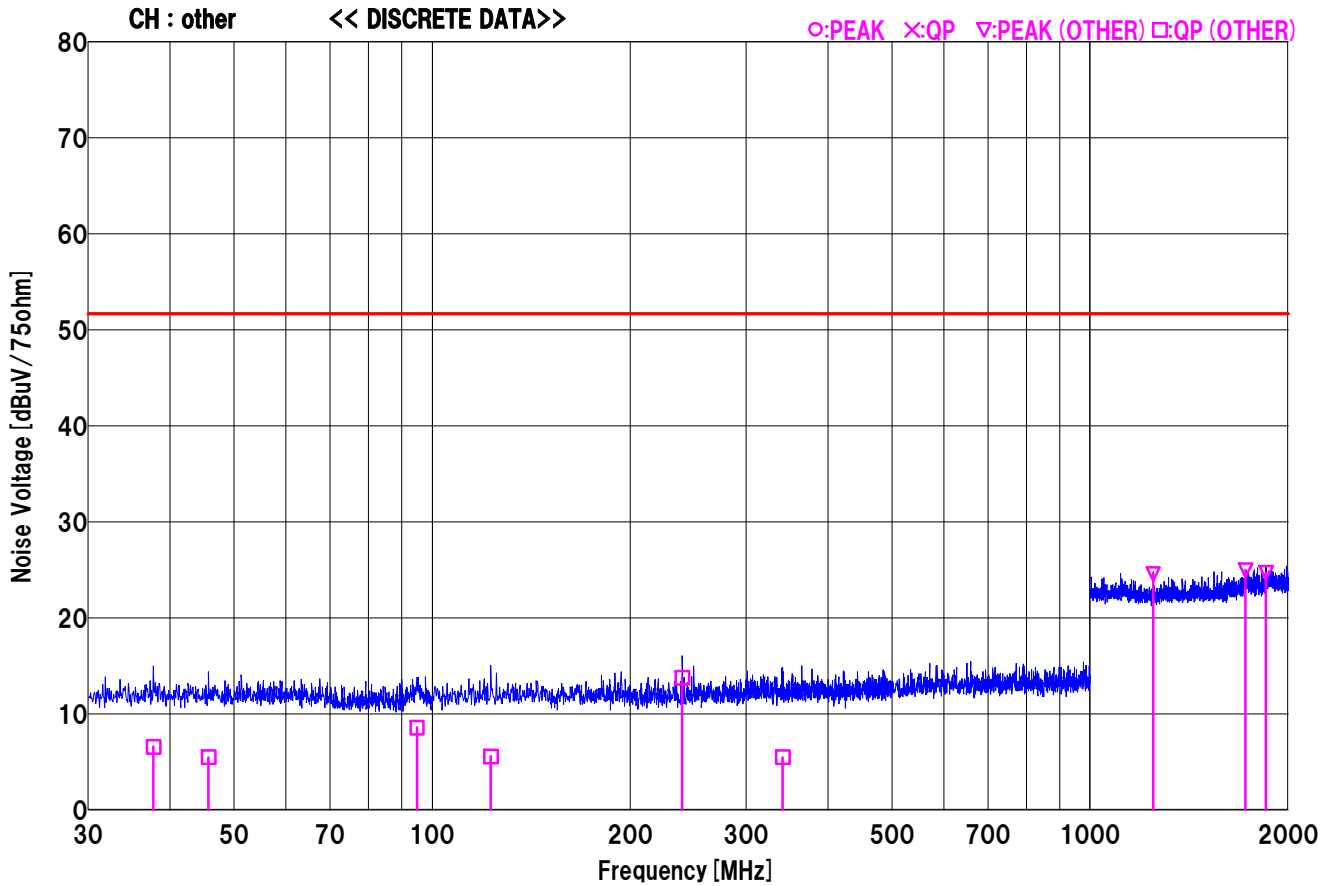
Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNNS122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Digital (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Other, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : — FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : — FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] +1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNNS122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Digital (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Other, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*37.700	----	19.8	-13.2	----	6.6	51.7	45.1
	*45.750	----	18.7	-13.2	----	5.5	51.7	46.2
	*94.890	----	21.7	-13.1	----	8.6	51.7	43.1
	*122.800	----	18.6	-13.0	----	5.6	51.7	46.1
	*239.998	----	26.6	-12.8	----	13.8	51.7	37.9
	*341.003	----	18.1	-12.6	----	5.5	51.7	46.2
	*1247.000	36.6	----	-12.0	24.6	----	51.7	27.1
	*1723.000	36.5	----	-11.5	25.0	----	51.7	26.7
	*1852.000	36.1	----	-11.4	24.7	----	51.7	27.0

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (87.75 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
8775MHz	87970	----	166	-13.1	----	3.5	51.7	48.2
	175940	----	17.1	-12.8	----	4.3	51.7	47.4
	263910	----	18.2	-12.7	----	5.5	51.7	46.2
	351880	----	16.6	-12.5	----	4.1	51.7	47.6
	439850	----	16.4	-12.3	----	4.1	51.7	47.6
	527820	----	16.2	-12.2	----	4.0	51.7	47.7
	615790	----	16.3	-11.9	----	4.4	51.7	47.3
	703760	----	16.2	-11.8	----	4.4	51.7	47.3
	791730	----	16.3	-11.8	----	4.5	51.7	47.2
	879700	----	16.3	-11.8	----	4.5	51.7	47.2
	967670	----	16.6	-11.9	----	4.7	51.7	47.0
	1055640	34.1	----	-12.1	22.0	----	51.7	29.7
	1495490	34.5	----	-11.8	22.7	----	51.7	29.0
	1847370	34.3	----	-11.4	22.9	----	51.7	28.8
	87530	----	16.6	-13.1	----	3.5	51.7	48.2
	175060	----	17.2	-12.8	----	4.4	51.7	47.3
	262590	----	17.0	-12.7	----	4.3	51.7	47.4
	350120	----	16.7	-12.5	----	4.2	51.7	47.5
	437650	----	16.4	-12.3	----	4.1	51.7	47.6
	525180	----	16.3	-12.2	----	4.1	51.7	47.6
	612710	----	16.2	-11.9	----	4.3	51.7	47.4
	700240	----	16.2	-11.8	----	4.4	51.7	47.3
	787770	----	16.3	-11.8	----	4.5	51.7	47.2
	875300	----	16.3	-11.8	----	4.5	51.7	47.2
	962830	----	16.6	-11.9	----	4.7	51.7	47.0
	1050360	33.6	----	-12.1	21.5	----	51.7	30.2
	1488010	34.2	----	-11.8	22.4	----	51.7	29.3
	1838130	34.2	----	-11.4	22.8	----	51.7	28.9

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
97.7MHz	97920	----	18.1	-13.1	----	5.0	51.7	46.7
	195840	----	17.0	-12.8	----	4.2	51.7	47.5
	293760	----	16.6	-12.6	----	4.0	51.7	47.7
	391680	----	16.5	-12.5	----	4.0	51.7	47.7
	489600	----	16.3	-12.2	----	4.1	51.7	47.6
	587520	----	16.5	-12.0	----	4.5	51.7	47.2
	685440	----	16.3	-11.8	----	4.5	51.7	47.2
	783360	----	16.3	-11.8	----	4.5	51.7	47.2
	881280	----	16.2	-11.8	----	4.4	51.7	47.3
	979200	----	16.5	-11.9	----	4.6	51.7	47.1
	1077120	34.6	----	-12.0	22.6	----	51.7	29.1
	1566720	34.3	----	-11.7	22.6	----	51.7	29.1
	1860480	34.4	----	-11.4	23.0	----	51.7	28.7
	97480	----	18.5	-13.1	----	5.4	51.7	46.3
	194960	----	17.2	-12.8	----	4.4	51.7	47.3
	292440	----	16.8	-12.6	----	4.2	51.7	47.5
	389920	----	16.3	-12.5	----	3.8	51.7	47.9
	487400	----	16.3	-12.3	----	4.0	51.7	47.7
	584880	----	16.2	-12.0	----	4.2	51.7	47.5
	682360	----	16.5	-11.8	----	4.7	51.7	47.0
	779840	----	16.3	-11.8	----	4.5	51.7	47.2
877320	----	16.3	-11.8	----	4.5	51.7	47.2	
974800	----	16.5	-11.9	----	4.6	51.7	47.1	
1072280	34.1	----	-12.0	22.1	----	51.7	29.6	
1559680	34.6	----	-11.7	22.9	----	51.7	28.8	
1852120	34.5	----	-11.4	23.1	----	51.7	28.6	

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (107.9 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
107.9MHz	108.120	----	17.7	-13.0	----	4.7	51.7	47.0
	216.240	----	16.7	-12.8	----	3.9	51.7	47.8
	324.360	----	17.3	-12.6	----	4.7	51.7	47.0
	432.480	----	16.4	-12.3	----	4.1	51.7	47.6
	540.600	----	16.3	-12.2	----	4.1	51.7	47.6
	648.720	----	16.3	-11.9	----	4.4	51.7	47.3
	756.840	----	16.2	-11.8	----	4.4	51.7	47.3
	864.960	----	16.5	-11.8	----	4.7	51.7	47.0
	973.080	----	16.6	-11.9	----	4.7	51.7	47.0
	1081.200	34.4	----	-12.0	22.4	----	51.7	29.3
	1729.920	34.8	----	-11.5	23.3	----	51.7	28.4
	1946.160	34.3	----	-11.3	23.0	----	51.7	28.7
	107.680	----	18.2	-13.0	----	5.2	51.7	46.5
	215.360	----	16.6	-12.8	----	3.8	51.7	47.9
	323.040	----	17.0	-12.6	----	4.4	51.7	47.3
	430.720	----	16.5	-12.4	----	4.1	51.7	47.6
	538.400	----	16.5	-12.2	----	4.3	51.7	47.4
	646.080	----	16.2	-11.9	----	4.3	51.7	47.4
	753.760	----	16.2	-11.8	----	4.4	51.7	47.3
	861.440	----	16.3	-11.8	----	4.5	51.7	47.2
	969.120	----	16.6	-11.9	----	4.7	51.7	47.0
1076.800	34.2	----	-12.0	22.2	----	51.7	29.5	
1722.880	34.9	----	-11.5	23.4	----	51.7	28.3	
1938.240	34.1	----	-11.4	22.7	----	51.7	29.0	

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

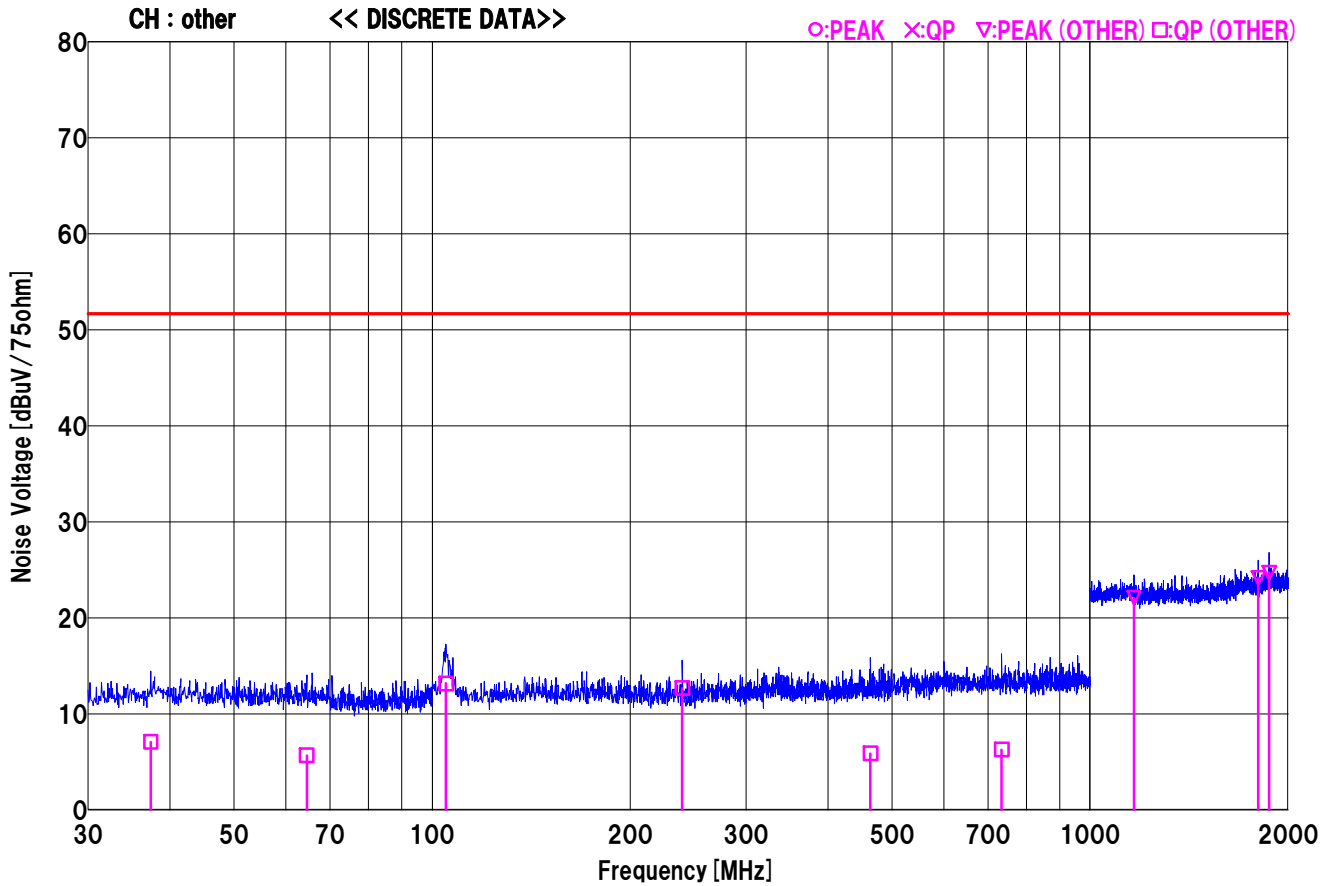
Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNNS122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Other, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : — FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : — FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] +1.76 (50 ohm to 75 ohm) [dB]



# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNNS122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Other, Port A

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*37.350	----	20.3	-13.2	----	7.1	51.7	44.6
	*64.510	----	18.8	-13.1	----	5.7	51.7	46.0
	*105.000	----	26.2	-13.0	----	13.2	51.7	38.5
	*239.998	----	25.5	-12.8	----	12.7	51.7	39.0
	*463.610	----	18.2	-12.3	----	5.9	51.7	45.8
	*734.000	----	18.1	-11.8	----	6.3	51.7	45.4
	*1166.000	34.1	----	-12.0	22.1	----	51.7	29.6
	*1801.000	35.6	----	-11.4	24.2	----	51.7	27.5
	*1872.000	36.1	----	-11.4	24.7	----	51.7	27.0

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (87.75 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port B

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
8775MHz	87970	----	16.5	-13.1	----	3.4	51.7	48.3
	175940	----	17.0	-12.8	----	4.2	51.7	47.5
	263910	----	16.7	-12.7	----	4.0	51.7	47.7
	351880	----	16.6	-12.5	----	4.1	51.7	47.6
	439850	----	16.5	-12.3	----	4.2	51.7	47.5
	527820	----	16.3	-12.2	----	4.1	51.7	47.6
	615790	----	16.3	-11.9	----	4.4	51.7	47.3
	703760	----	16.2	-11.8	----	4.4	51.7	47.3
	791730	----	16.2	-11.8	----	4.4	51.7	47.3
	879700	----	16.5	-11.8	----	4.7	51.7	47.0
	967670	----	16.6	-11.9	----	4.7	51.7	47.0
	1055640	34.0	----	-12.1	21.9	----	51.7	29.8
	1495490	34.2	----	-11.8	22.4	----	51.7	29.3
	1847370	34.0	----	-11.4	22.6	----	51.7	29.1
	87530	----	16.5	-13.1	----	3.4	51.7	48.3
	175060	----	17.0	-12.8	----	4.2	51.7	47.5
	262590	----	16.6	-12.7	----	3.9	51.7	47.8
	350120	----	16.6	-12.5	----	4.1	51.7	47.6
	437650	----	16.4	-12.3	----	4.1	51.7	47.6
	525180	----	16.3	-12.2	----	4.1	51.7	47.6
	612710	----	16.3	-11.9	----	4.4	51.7	47.3
	700240	----	16.1	-11.8	----	4.3	51.7	47.4
	787770	----	16.2	-11.8	----	4.4	51.7	47.3
	875300	----	16.3	-11.8	----	4.5	51.7	47.2
	962830	----	16.6	-11.9	----	4.7	51.7	47.0
	1050360	34.0	----	-12.1	21.9	----	51.7	29.8
	1488010	33.8	----	-11.8	22.0	----	51.7	29.7
	1838130	33.8	----	-11.4	22.4	----	51.7	29.3

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port B

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
97.7MHz	97920	----	17.3	-13.1	----	4.2	51.7	47.5
	195840	----	17.5	-12.8	----	4.7	51.7	47.0
	293760	----	16.7	-12.6	----	4.1	51.7	47.6
	391680	----	16.5	-12.5	----	4.0	51.7	47.7
	489600	----	16.3	-12.2	----	4.1	51.7	47.6
	587520	----	16.3	-12.0	----	4.3	51.7	47.4
	685440	----	16.2	-11.8	----	4.4	51.7	47.3
	783360	----	16.3	-11.8	----	4.5	51.7	47.2
	881280	----	16.3	-11.8	----	4.5	51.7	47.2
	979200	----	16.5	-11.9	----	4.6	51.7	47.1
	1077120	34.2	----	-12.0	22.2	----	51.7	29.5
	1566720	33.6	----	-11.7	21.9	----	51.7	29.8
	1860480	33.3	----	-11.4	21.9	----	51.7	29.8
	97480	----	17.5	-13.1	----	4.4	51.7	47.3
	194960	----	17.5	-12.8	----	4.7	51.7	47.0
	292440	----	17.0	-12.6	----	4.4	51.7	47.3
	389920	----	16.6	-12.5	----	4.1	51.7	47.6
	487400	----	16.4	-12.3	----	4.1	51.7	47.6
	584880	----	16.3	-12.0	----	4.3	51.7	47.4
	682360	----	16.2	-11.8	----	4.4	51.7	47.3
	779840	----	16.3	-11.8	----	4.5	51.7	47.2
	877320	----	16.3	-11.8	----	4.5	51.7	47.2
	974800	----	16.5	-11.9	----	4.6	51.7	47.1
1072280	34.3	----	-12.0	22.3	----	51.7	29.4	
1559680	33.7	----	-11.7	22.0	----	51.7	29.7	
1852120	34.3	----	-11.4	22.9	----	51.7	28.8	

Calculation:Rsult [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNN5122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (107.9 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Local, Port B

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq [MHz]	Reading		Factor [dB]	Result		Limit [dBuV/75]	Margin [dB]
		PEAK	QP		PEAK	QP		
		[dBuV]			[dBuV/75]			
107.9MHz	108.120	----	17.8	-13.0	----	4.8	51.7	46.9
	216.240	----	16.8	-12.8	----	4.0	51.7	47.7
	324.360	----	17.5	-12.6	----	4.9	51.7	46.8
	432.480	----	16.7	-12.3	----	4.4	51.7	47.3
	540.600	----	16.6	-12.2	----	4.4	51.7	47.3
	648.720	----	16.3	-11.9	----	4.4	51.7	47.3
	756.840	----	16.3	-11.8	----	4.5	51.7	47.2
	864.960	----	16.3	-11.8	----	4.5	51.7	47.2
	973.080	----	16.5	-11.9	----	4.6	51.7	47.1
	1081.200	33.7	----	-12.0	21.7	----	51.7	30.0
	1729.920	33.6	----	-11.5	22.1	----	51.7	29.6
	1946.160	34.2	----	-11.3	22.9	----	51.7	28.8
	107.680	----	18.0	-13.0	----	5.0	51.7	46.7
	215.360	----	16.8	-12.8	----	4.0	51.7	47.7
	323.040	----	17.6	-12.6	----	5.0	51.7	46.7
	430.720	----	16.7	-12.4	----	4.3	51.7	47.4
	538.400	----	16.3	-12.2	----	4.1	51.7	47.6
	646.080	----	16.3	-11.9	----	4.4	51.7	47.3
	753.760	----	16.3	-11.8	----	4.5	51.7	47.2
	861.440	----	16.3	-11.8	----	4.5	51.7	47.2
	969.120	----	16.5	-11.9	----	4.6	51.7	47.1
1076.800	34.4	----	-12.0	22.4	----	51.7	29.3	
1722.880	33.8	----	-11.5	22.3	----	51.7	29.4	
1938.240	34.5	----	-11.4	23.1	----	51.7	28.6	

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

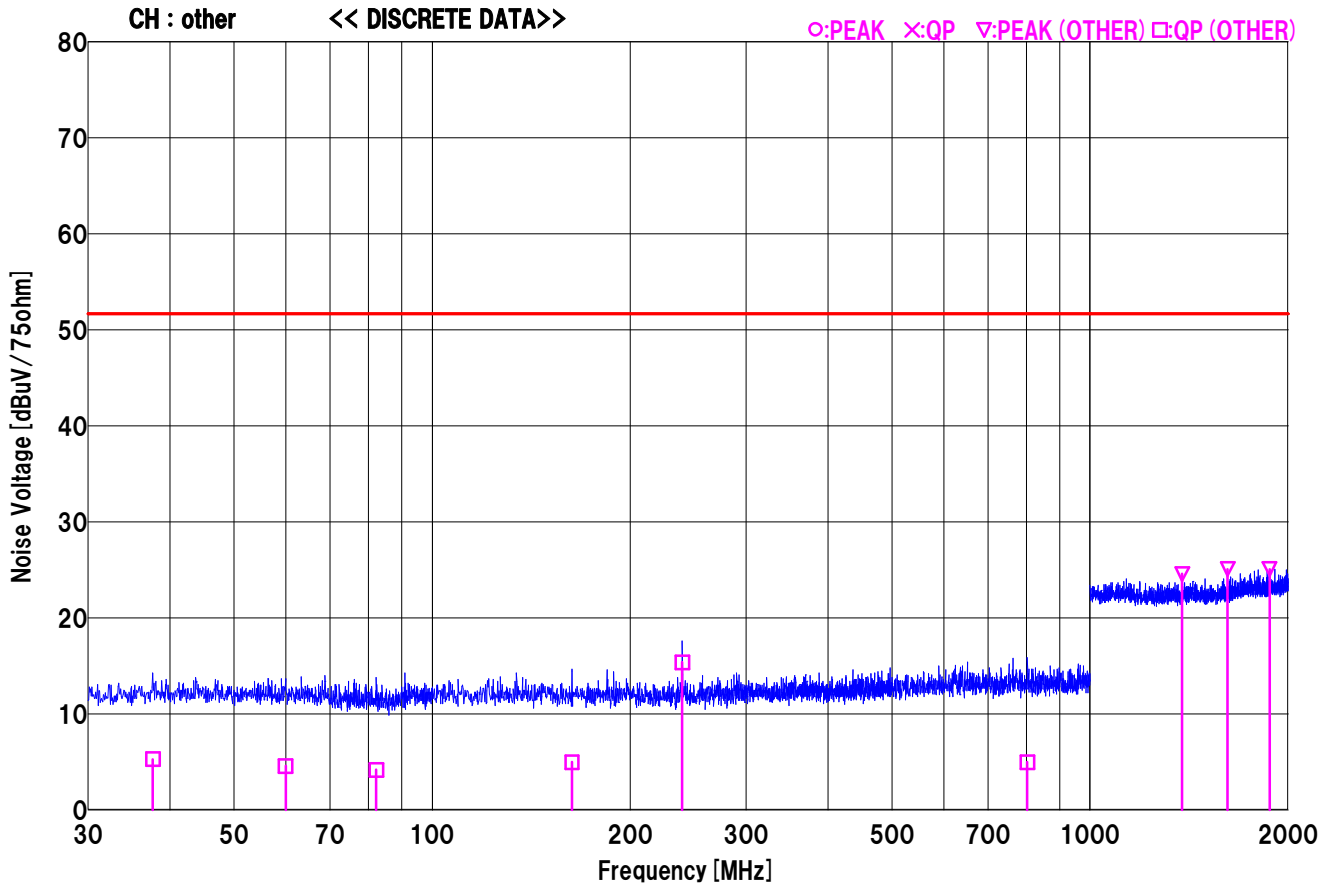
Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNNS122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Other, Port B

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : — FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : — FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal



Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] +1.76 (50 ohm to 75 ohm) [dB]

# DATA OF ANTENNA TERMINAL TEST

UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room  
Date : 2021/01/30

Company : DENSO Corporation  
Kind of EUT : Cockpit Control Unit  
Model No. : DNNS122  
Serial No. : CP1.5-K3-GZ1-US-High-064

Mode : FM Reception Analog (97.7 MHz)  
Order No. : 13692701S  
Power : DC 13.2 V  
Temp./Humi. : 23 deg.C / 40 %RH

Remarks : Other, Port B

Engineer : Yohsuke Matsuzawa

LIMIT (Fundamental) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal  
LIMIT (Harmonics) : FCC Part15 SubpartB\_Antenna terminal / FCC Part15 SubpartB\_Antenna terminal

CH	Freq	Reading		Factor	Result		Limit	Margin
		PEAK	QP		PEAK	QP		
	[MHz]	[dBuV]		[dB]	[dBuV/75]		[dBuV/75]	[dB]
other	*37.630	----	18.5	-13.2	----	5.3	51.7	46.4
	*59.890	----	17.7	-13.1	----	4.6	51.7	47.1
	*82.290	----	17.3	-13.1	----	4.2	51.7	47.5
	*163.199	----	17.8	-12.8	----	5.0	51.7	46.7
	*239.998	----	28.2	-12.8	----	15.4	51.7	36.3
	*802.500	----	16.7	-11.7	----	5.0	51.7	46.7
	*1380.500	36.5	----	-11.9	246	----	51.7	27.1
	*1619.000	36.7	----	-11.6	25.1	----	51.7	26.6
	*1874.000	36.5	----	-11.4	25.1	----	51.7	26.6

Calculation:Result [dBuV] =Reading [dBuV] +Fac (Cable+Matching Pad-Amp+Combiner) [dB] + 1.76 (50 ohm to 75 ohm) [dB]

**APPENDIX 3**

## Test Instruments

## EMI test equipment

Test Name	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Calibration Interval (Month)
AT	COTS-SEMI-2	144866	EMI Software for AV Equipment	TSJ (Techno Science Japan)	TEPTO-DV(AT,TV)	2	-	-
AT	SAF-07	145006	Pre Amplifier	TSJ (Techno Science Japan)	MLA-8k03-D01-35	81212	2020/06/24	12
AT	SCC-AT1/AT2/KM P-09	180424	Coaxial cable, Matching pad	TAMAGAWA	5D2W/ZT-130	-/1454514E	2020/06/24	12
AT	SOS-22	191839	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2020/10/01	12
AT	STR-01	145790	Test Receiver	Rohde & Schwarz	ESU40	100093	2020/04/24	12
AT,RE	STS-02	145793	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997819	2020/04/09	12
RE	COTS-SEMI-5	170932	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3(RE,CE,ME,PE)	-	-	-
RE	KJM-09	145929	Measure	KOMELON	KMC-36	-	-	-
RE	KJM-10	146454	Measure	KOMELON	KMC-36	-	-	-
RE	SAEC-02(NSA)	145563	Semi-Anechoic Chamber	TDK	SAEC-02(NSA)	2	2020/03/20	12
RE	SAEC-02(SVSWR)	145598	Semi-Anechoic Chamber	TDK	SAEC-02(SVSWR)	2	2020/05/07	12
RE	SAF-02	145004	Pre Amplifier	SONOMA	310N	290212	2020/02/19	12
RE	SAF-05	145128	Pre Amplifier	Toyo Corporation	TPA0118-36	1440490	2020/06/03	12
RE	SAF-08	145007	Pre Amplifier	Toyo Corporation	HAP18-26W	19	2020/03/03	12
RE	SAF-10	145129	Pre Amplifier	Toyo Corporation	HAP26-40W	10	2020/03/03	12
RE	SAT3-11	150921	Attenuator	JFW	50HF-003N	-	2021/01/26	12
RE	SAT6-14	167095	Attenuator	JFW	50HF-006N	-	2020/02/21	12
RE	SBA-02	145022	Biconical Antenna	Schwarzbeck Mess - Elektronik	BBA9106	91032665	2020/04/04	12
RE	SCC-B1/B3/B5/B7/B8/B13/SRSE-02	144975	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	2020/04/17	12
RE	SCC-B2/B4/B6/B7/B8/B13/SRSE-02	144976	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	2020/04/17	12
RE	SCC-G15	145176	Coaxial Cable	Suhner	SUCOFLEX 102	32703/2	2020/03/04	12
RE	SCC-G41	151617	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S006	2021/01/19	12
RE	SCC-G50	178573	Coaxial Cable	Huber+Suhner	SUCOFLEX_104_E	MY13407/4E	2020/03/09	12
RE	SCC-G51	178572	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	800288 /4A	2020/03/09	12
RE	SCC-G57	179540	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	802815/2	2020/05/12	12
RE	SCC-G69	200009	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	575617/4	2020/07/07	12
RE	SHA-02	145384	Horn Antenna	Schwarzbeck Mess - Elektronik	BBHA9120D	9120D-726	2020/06/15	12
RE	SHA-04	145512	Horn Antenna	ETS-Lindgren	3160-09	00094868	2020/06/15	12
RE	SHA-06	145514	Horn Antenna	ETS-Lindgren	3160-10	00092383	2020/07/16	12
RE	SHA-09	194684	Horn Antenna	Schwarzbeck Mess - Elektronik	BBHA 9120 C	695	2020/02/17	12
RE	SLA-06	145528	Logperiodic Antenna	Schwarzbeck Mess - Elektronik	VUSLP9111B	195	2020/04/04	12
RE	SOS-21	191838	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2020/09/28	12
RE	STR-07	146209	Receiver, EMI	Rohde & Schwarz	ESU26	100484	2020/09/07	12
RE	STR-08	150463	Test Receiver	Rohde & Schwarz	ESW44	101581	2020/12/02	12

\*Hyphens for Last Calibration Date and Cal Int (month) are instruments that Calibration is not required (e.g. software), or instruments checked in advance before use.

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

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

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards

Test Item:

RE: Radiated emission,

AT: Antenna terminal disturbance voltage

End of Report