

# DATA OF MAGNETIC EMISSION TEST

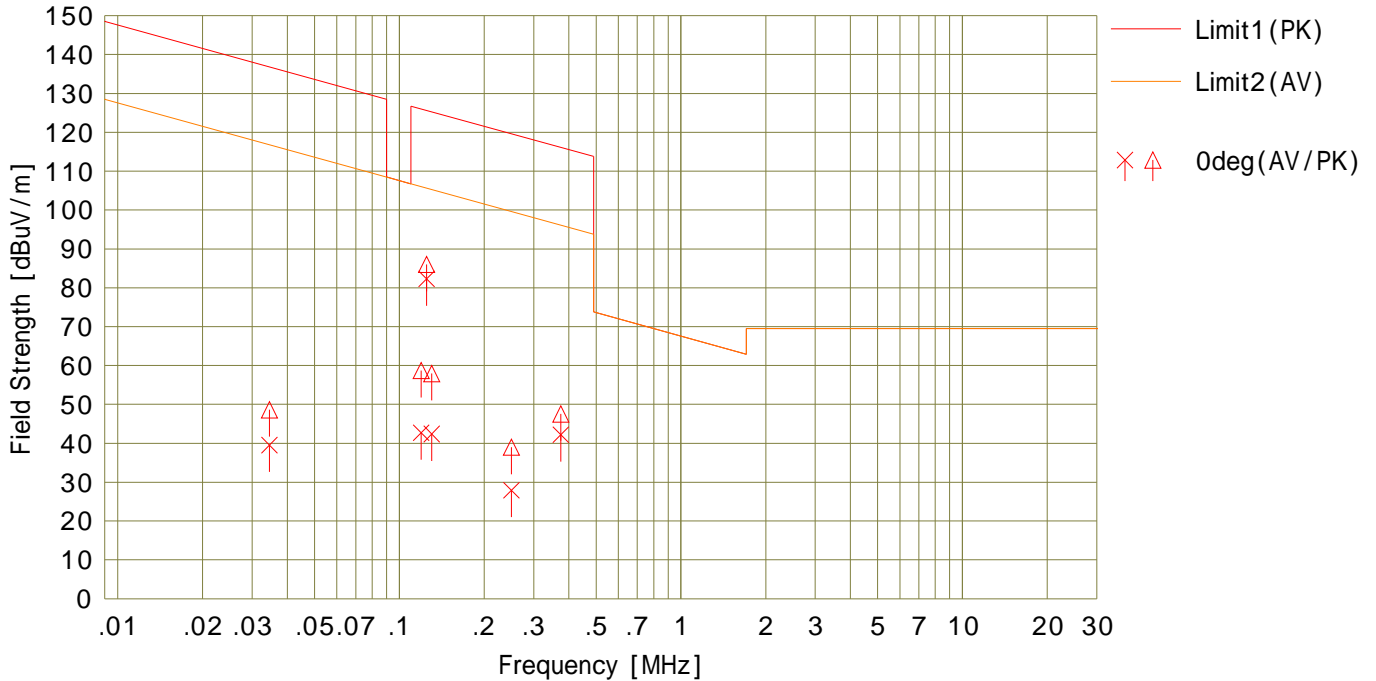
UL Japan, Inc. Shonan EMC Lab. No.2 Semi - Anechoic Chamber  
Date : 2010/05/17

Company : Honda Lock Mfg. Co., Ltd.	Mode : Transmitting
Kind of EUT : Engine Start Stop Switch with Immobilizer	Report No. : 30IE0135-SH-02-B
Model No. : HLBUS-1	Power : DC12V
Serial No. : 382	Temp./Humi. : 23deg.C / 52%

Remarks : EUT:X

Limit1 : FCC15.209(a) 3m, 9-90,110-490kHz:PK, other:QP

Limit2 : FCC15.209(a) 3m, 9-90,110-490kHz:AV, other:QP      Tested by : Makoto Hosaka



No.	Freq. [MHz]	Reading		Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result		Limit		Margin		Antenna	Table [deg]	Comment
		<AV>	<PK>				<AV>	<PK>	<PK>	<AV>	<PK>	<AV>			
		[dBuV]	[dBuV]				[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]			
1	0.03452	43.9	53.0	20.2	5.9	30.5	39.5	48.6	136.8	116.8	88.2	77.3	0deg	350	
2	0.11954	48.3	64.3	20.0	5.9	31.5	42.7	58.7	126.0	106.0	67.3	63.3	0deg	136	
3	0.12497	88.0	91.7	20.0	5.9	31.6	82.3	86.0	125.6	105.7	39.6	23.4	0deg	136	
4	0.13030	48.2	63.7	20.0	5.9	31.7	42.4	57.9	125.2	105.3	67.3	62.9	0deg	136	
5	0.25000	34.0	45.1	19.9	5.9	31.9	27.9	39.0	119.6	99.6	80.6	71.7	0deg	306	
6	0.37525	48.4	53.7	19.8	5.9	31.9	42.2	47.5	116.1	96.1	68.6	53.9	0deg	130	

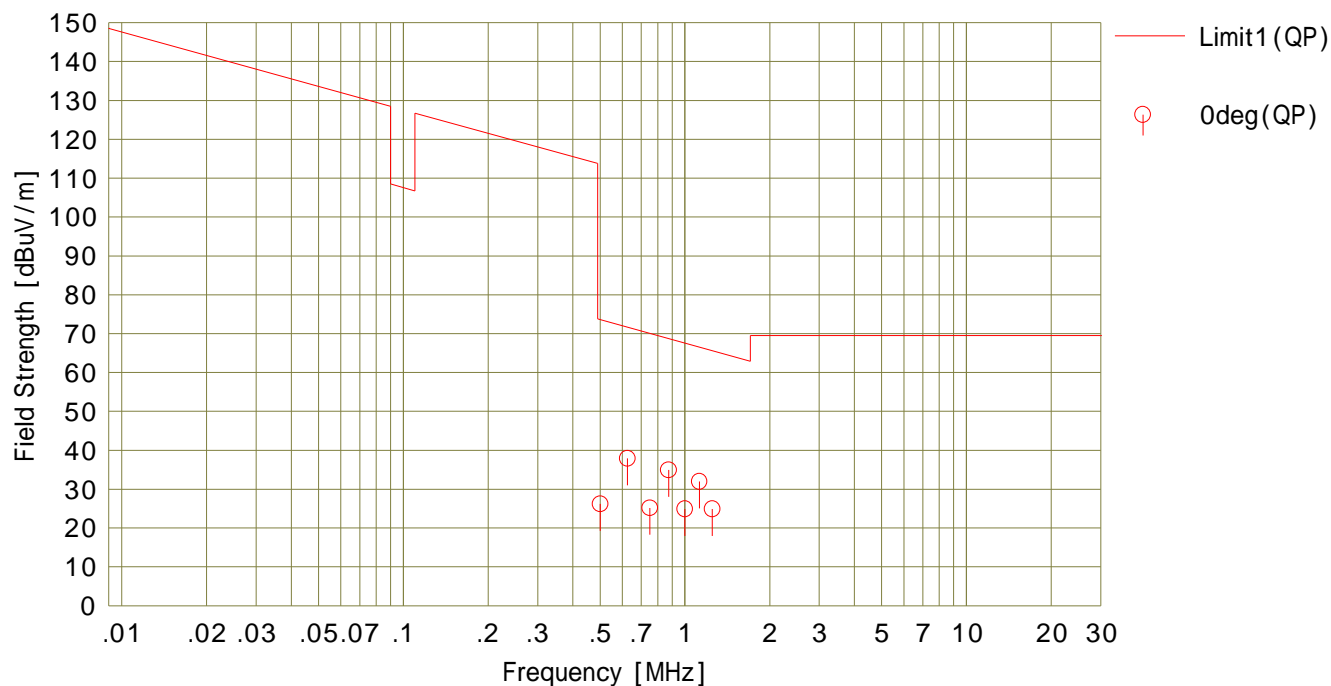
# DATA OF MAGNETIC EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi - Anechoic Chamber  
Date : 2010/05/17

Company : Honda Lock Mfg. Co., Ltd.	Mode : Transmitting
Kind of EUT : Engine Start Stop Switch with Immobilizer	Report No. : 30IE0135-SH-02-B
Model No. : HLBUS-1	Power : DC12V
Serial No. : 382	Temp./Humi. : 23deg.C / 52%
Remarks : EUT:X	

Limit1 : FCC15.209(a) 3m, 9-90,110-490kHz:PK, other:QP

Tested by : Makoto Hosaka



No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result	Limit	Margin	Antenna	Table	Comment
		<QP> [dBuV]				<QP> [dBuV/m]	<QP> [dB]	<QP> [deg]			
1	0.50020	32.4	19.8	5.9	31.9	26.2	73.6	47.4	0deg	166	
2	0.62500	44.1	19.8	5.9	31.9	37.9	71.7	33.8	0deg	299	
3	0.75000	31.3	19.8	6.0	31.9	25.2	70.1	44.9	0deg	80	
4	0.87500	41.0	19.8	6.0	31.9	34.9	68.7	33.8	0deg	303	
5	1.00000	31.0	19.8	6.0	31.9	24.9	67.6	42.7	0deg	16	
6	1.12500	38.1	19.8	6.0	31.9	32.0	66.5	34.5	0deg	25	
7	1.25000	31.0	19.8	6.0	31.9	24.9	65.6	40.7	0deg	166	

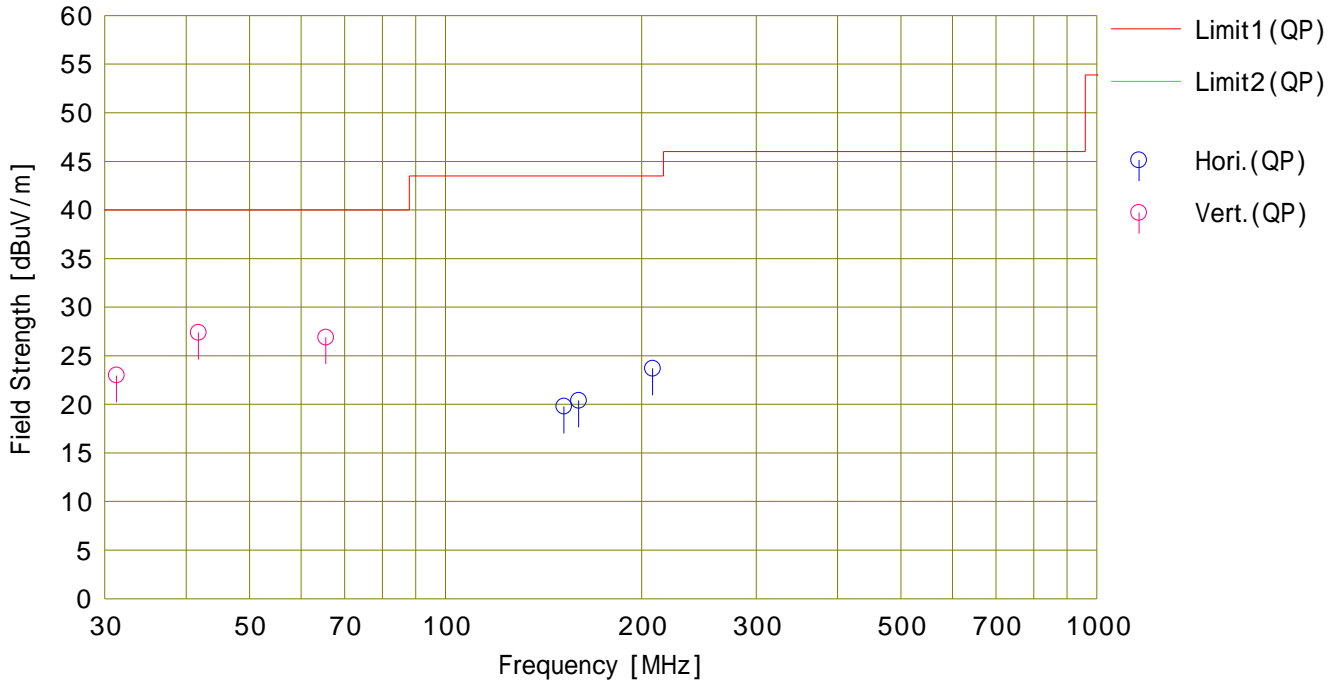
# DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.2 Semi - Anechoic Chamber  
Date : 2010/05/18

Company : Honda Lock Mfg. Co., Ltd.	Mode : Transmitting
Kind of EUT : Engine Start Stop Switch with Immobilizer	Report No. : 30IE0135-SH-02-B
Model No. : HLBUS-1	Power : DC12V
Serial No. : 382	Temp./Humi. : 22deg.C / 49%
Remarks : EUT:Y	

Limit1 : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV

Engineer : Makoto Hosaka



No.	Freq. [MHz]	Reading	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result	Limit			Margin		Pola.	Height [cm]	Angle [deg]	Ant. Type	Comment
		<QP> [dBuV]				<QP> [dBuV/m]	<QP> [dBuV/m]	<QP> [dB]	<QP> [dB]	<QP> [dB]	<QP> [dB]					
1	152.007	28.3	14.9	8.4	31.8	19.8	43.5	---	23.7	---	Hori.	209	208	BC		
2	160.010	28.8	14.9	8.5	31.8	20.4	43.5	---	23.1	---	Hori.	209	208	BC		
3	208.005	29.7	16.7	9.0	31.7	23.7	43.5	---	19.8	---	Hori.	154	217	BC		
4	31.253	31.1	16.9	6.9	31.9	23.0	40.0	---	17.0	---	Vert.	100	358	BC		
5	41.754	38.3	13.9	7.1	31.9	27.4	40.0	---	12.6	---	Vert.	100	340	BC		
6	65.504	43.8	7.5	7.4	31.8	26.9	40.0	---	13.1	---	Vert.	100	149	BC		

## -26dB/ 99% Occupied Bandwidth

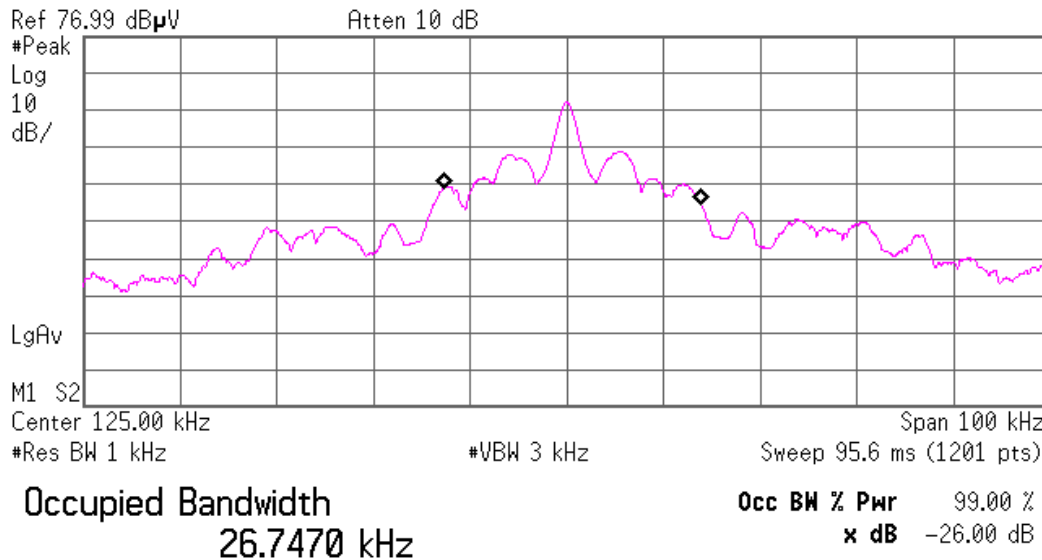
UL Japan, Inc.  
 SHONAN EMC Lab. No.5 Shielded Room  
 Report No. : 30IE0135-SH-02-B

Company	: Honda Lock Mfg. Co., Ltd.	Regulation (-26dB) : ANSI C 63.4 13.1.7
Equipment	: Engine Start Stop Switch with Immobilizer	Regulation (Occupied) : RSS-Gen 4.4.1
Model	: HLBUS-1	Date : May 19, 2010
Sample No.	: 382	Temperature : 24deg.C
Power	: DC 12.0V	Humidity : 48%
Mode	: Transmitting	

ENGINEER : Makoto Hosaka

Frequency [kHz]	-26dB Bandwidth [kHz]	99% Occupied Bandwidth [kHz]
125	26.966	26.747

✳ Agilent



**Transmit Freq Error**      580.133 Hz  
**x dB Bandwidth**      26.966 kHz

**APPENDIX 3  
Test Instruments**

**EMI test equipment**

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SAF-02	Pre Amplifier	SONOMA	310N	290212	RE	2010/02/06 * 12
SAT6-02	Attenuator	JFW	50HF-006N	-	RE	2010/02/06 * 12
SAT3-02	Attenuator	JFW	50HF-003N	-	RE	2010/02/06 * 12
SBA-02	Biconical Antenna	Schwarzbeck	BBA9106	91032665	RE	2010/03/13 * 12
SCC-B1/B3/B5/B7/B8/B13/SRSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	RE	2010/04/02 * 12
SCC-B2/B4/B6/B7/B8/B13/SRSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	RE	2010/04/02 * 12
SLA-02	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A0893	RE	2010/03/13 * 12
SOS-03	Humidity Indicator	A&D	AD-5681	4063325	RE	2010/02/09 * 12
STR-02	Test Receiver	Rohde & Schwarz	ESCI	100575	RE	2009/07/24 * 12
SJM-02	Measure	KOMELON	KMC-36	-	RE	-
SAEC-02(NSA)	Semi-Anechoic Chamber	TDK	SAEC-02(NSA)	2	RE	2009/09/16 * 12
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV	-	RE	-
SLP-02	Loop Antenna	Rohde & Schwarz	HFH2-Z2	100218	RE	2009/10/06 * 12
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	BW	2009/06/09 * 12
SSCA-01	Search coil	LANGER	RF-R 400-1	02-0634	BW	Pre Check
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	BW	2010/02/17 * 12

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 traceable calibrations . Each calibration is traceable to the national or international standards .

Test Item :

- RE: Radiated emission ,
- BW: Bandwidth