TEST REPORT

of

FCC CFR 47 part 1, 1.1307(b), 1.1310

FCC ID: TQ8-ADB10G8GG

Equipment Under Test	:	DISPLAY CAR SYSTEM
Model Name	:	ADB10G8GG
Variant Model Name	:	ADB14G8GG, ADB15G8GG
Applicant	:	Hyundai MOBIS Co., Ltd.
Manufacturer	:	Hyundai MOBIS Co., Ltd.
Date of Test(s)	:	2016.07.01 ~ 2016.07.05
Date of Issue	:	2016.07.08

In the configuration tested, the EUT complied with the standards specified above.

Tested By: Patrick Kang **Date:** 2016.07.08

Approved By: Alvin Kim **Date:** 2016.07.08

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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)
-Wireless Div. 2FL, 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx.
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1.2. Details of applicant

Applicant : Hyundai MOBIS Co., Ltd.
Address : 203, Teheran-ro, Gangnam-gu, Seoul, 06141, Rep of Korea
Contact Person : Kwon, Heung-Chul
Phone No. : +82 31 260 2714

1.3. Description of EUT

Kind of Product	DISPLAY CAR SYSTEM
Model Name	ADB10G8GG
Variant Model Name	ADB14G8GG, ADB15G8GG
Power Supply	DC 14.4 V
Frequency Range	2 402 ㎒ ~ 2 480 ㎒
Modulation Technique	GFSK, π/4DQPSK, 8DPSK
Number of Channels	79 channels
Antenna Type	Chip antenna
Antenna Gain	-0.10 ㏈i

1.4. Information of Variant model

Model name		H/W				S/W	
		Bluetooth	USB	GPS	XM	RDS	FM/AM BAND
Basic model	ADB10G8GG	O	O	O	X	X	General BAND
Variant model	ADB14G8GG	O	O	O	X	X	North America BAND
	ADB15G8GG	O	O	O	X	X	Europe BAND

1.5. Test report revision

Revision	Report number	Date of Issue	Description
0	F690501/RF-RTL010096	2016.07.08	Initial

2. RF Exposure Evaluation

2.1. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (㎒)	Electric Field Strength(V/m)	Magnetic Field Strength (A/m)	Power Density (㎽/㎠)	Average Time
(A) Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	*100	6
3.0 – 30	1842/f	4.89/f	*900/f^2	6
30 – 300	61.4	0.163	1.0	6
300 – 1 500	-	-	f/300	6
1 500 – 100 000	-	-	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3 – 1.34	614	1.63	*100	30
1.34 – 30	824/f	2.19/f	*180/f^2	30
30 – 300	27.5	0.073	0.2	30
300 – 1 500	-	-	f/1500	30
1 500 – 100 000	-	-	**1.0**	**30**

2.1.1. Friis transmission formula: Pd = (Pout*G)/(4*pi*R^2)

Where Pd = power density in ㎽/㎠

Pout = output power to antenna in ㎽

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in ㎝

Pd the limit of MPE, 1 ㎽/㎠. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

2.1.2. Test Result of RF Exposure Evaluation

Test Item : RF Exposure Evaluation Data
Test Mode : Normal Operation

2.1.3. Output Power into Antenna & RF Exposure Evaluation Distance

BT
- Maximum tune up tolerance

Frequency (㎒)	Maximum Output Power to Antenna (dB m)	Antenna Gain (dB i)	Power Density at 20 ㎝ (㎽/㎠)	Limits (㎽/㎠)
2 402 – 2 480	4	-0.10	0.000 488	1

Note :
1. The power density Pd (5th column) at a distance of 20 ㎝ calculated from the friis transmission formula is far below the limit of 1 ㎽/㎠.