HCT CO.,LTD.
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FCC MPE REPORT

Certification

Applicant Name:
HYUNDAI MOBIS CO., LTD.

Address:
203, Teheran-ro, Gangnam-gu, Seoul, Korea (135-977)

Date of Issue:
January 18, 2017
Test Site/Location:
HCT CO., LTD., 74,Seoicheon-ro 578beon-gil,Majang-myeo, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA
Report No.: HCT-R-1701-E008
HCT FRN: 0005866421

FCC ID	**: TQ8-AVC30J5AN**
APPLICANT	**: HYUNDAI MOBIS CO., LTD.**

Model(s):	AVC30J5AN
EUT Type:	Car Audio System
Frequency Range:	2 402 MHz – 2 480 MHz (Bluetooth)
	2 412 MHz – 2 462 MHz (2.4 GHz Band)
	5 180 MHz – 5 825 MHz (5 GHz Band)

The measurements shown in this report were made in accordance with the procedures specified in §2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

Report prepared by
: Kyung Soo Kang
Test engineer of RF Team

Approved by
: Jong Seok Lee
Manager of RF Team

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-R-1701-E008	January 18, 2017	- First Approval Report

RF Exposure Statement

1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
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 - 1500	.....	.....	f/1500	30
1500 - 100.000	.....	.....	1.0	30

F = frequency in MHz
* = Plane-wave equivalent power density

2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = Power density
P = power input to antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

3. RESULTS

***Bluetooth mode**

Max Peak output Power at antenna input terminal	5.560	dBm
Max Peak output Power at antenna input terminal	3.597	mW
Prediction distance	20.000	cm
Prediction frequency	2441.000	MHz
Antenna Gain(typical)	-0.100	dBi
Antenna Gain(numeric)	0.977	-
Power density at prediction frequency(S)	0.001	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

***WLAN DTS Band (802.11b, g, n)**

Max Peak output Power at antenna input terminal	21.800	dBm
Max Peak output Power at antenna input terminal	151.356	mW
Prediction distance	20.000	cm
Prediction frequency	2412.000	MHz
Antenna Gain(typical)	3.020	dBi
Antenna Gain(numeric)	2.004	-
Power density at prediction frequency(S)	0.060	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

UNII Band 1(802.11a, n, ac)

Max Peak output Power at antenna input terminal	12.660	dBm
Max Peak output Power at antenna input terminal	18.450	mW
Prediction distance	20.000	cm
Prediction frequency	5180.000	MHz
Antenna Gain(typical)	0.850	dBi
Antenna Gain(numeric)	1.216	-
Power density at prediction frequency(S)	0.004	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

UNII Band 2A(802.11a, n, ac)

Max Peak output Power at antenna input terminal	12.710	dBm
Max Peak output Power at antenna input terminal	18.664	mW
Prediction distance	20.000	cm
Prediction frequency	5260.000	MHz
Antenna Gain(typical)	0.850	dBi
Antenna Gain(numeric)	1.216	-
Power density at prediction frequency(S)	0.005	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

UNII Band 2C(802.11a, n, ac)

Max Peak output Power at antenna input terminal	13.510	dBm
Max Peak output Power at antenna input terminal	22.439	mW
Prediction distance	20.000	cm
Prediction frequency	5720.000	MHz
Antenna Gain(typical)	0.850	dBi
Antenna Gain(numeric)	1.216	-
Power density at prediction frequency(S)	0.005	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

UNII Band 3(802.11a, n, ac)

Max Peak output Power at antenna input terminal	13.260	dBm
Max Peak output Power at antenna input terminal	21.184	mW
Prediction distance	20.000	cm
Prediction frequency	5825.000	MHz
Antenna Gain(typical)	0.850	dBi
Antenna Gain(numeric)	1.216	-
Power density at prediction frequency(S)	0.005	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2