TEST REPORT

FCC MPE Test for ADB11H6GG

Certification

APPLICANT HYUNDAI MOBIS CO., LTD

REPORT NO. HCT-RF-1911-FC026

DATE OF ISSUE November 22, 2019

74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA Tel. +82 31 634 6300 F ax. +82 31 645 6401

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FCC ID TQ8-ADB11H6GG

| Applicant | HYUNDAI MOBIS CO., LTD 203, Teheran-ro, Gangnam-gu, Seoul, 135-977, South Korea |
|------------------------|---|
| Eut Type Model Name | Car Audio System ADB11H6GG |
| Additional Model | ADB10H6IG, ADB11H6IG, ADB10H6GG, ADB13H6GG, ADB12H6GG, ADB10H6GN, ADB10H6MG, ADB10H6EG, ADB10H6EP, ADB11H6EP, ADB12H6EP, ADB10H6GP, ADB14H6GG |
| | The result shown in this test report refer only to the sample(s) tested unless otherwise stated. |

This test results were applied only to the test methods required by the standard.

Tested by Jung Ki Lim **Technical Manager** Jong Seok Lee

HCT CO., LTD. Soo Chan Lee





REVISION HISTORY

The revision history for this test report is shown in table.

| Revision No. | Date of Issue | Description |
|--------------|-------------------|-----------------|
| 0 | November 22, 2019 | Initial Release |

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.



RF Exposure Statement

1. Limit

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

| | | , I | | |
|--------------------------|----------------------------------|---------------------------------|--------------------------|----------------------------|
| Frequency range (MHz) | Electric field Strength (V/m) | Magneticfield Strength (A/m) | Powerdensity (mW/cm²) | Averagingtime (minutes) |
| 0.3 - 1.34 | 614 | 1.63 | *(100) | 30 |
| 1.34 - 30 | 824/f | 2.19/f | *(180/ f²) | 30 |
| 30 - 300 | 27.5 | 0.073 | 0.2 | 30 |
| 300 - 1500 | | ······· | f/1500 | 30 |
| 1500 - 100.000 | | ······ | 1.0 | 30 |
| | | | | |

(B) Limits for General Population/Uncontrolled Exposures

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 to the antenna in the direction of interest relative to an isotropic

radiator

R = Distance to the center of radiation of the antenna



3. RESULTS

3-1. Bluetooth

| Average output Power at antenna input terminal | 4.00 | dBm |
|---|-------------|--------------------|
| Average output Power at antenna input terminal | 2.51 | mW |
| Prediction distance | 20.00 | cm |
| Prediction frequency | 2402 – 2480 | MHz |
| Antenna Gain(typical) | -0.18 | dBi |
| Antenna Gain(numeric) | 0.959 | - |
| Power density at prediction frequency(S) | 0.0005 | mW/cm ² |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000 | mW/cm ² |

2.1091

| EIRP | 3.82 | (dBm) |
|-----------|-------|-------|
| ERP | 1.67 | (dBm) |
| ERP | 0.001 | (W) |
| ERP Limit | 3.00 | (W) |
| MARGIN | 33.10 | (dB) |



3-2. DTS

| Average output Power at antenna input terminal | 10.00 | dBm |
|---|-------------|--------------------|
| Average output Power at antenna input terminal | 10.00 | mW |
| Prediction distance | 20.00 | cm |
| Prediction frequency | 2412 - 2462 | MHz |
| Antenna Gain(typical) | -0.01 | dBi |
| Antenna Gain(numeric) | 0.998 | - |
| Power density at prediction frequency(S) | 0.0020 | mW/cm ² |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000 | mW/cm ² |

2.1091

| EIRP | 9.99 | (dBm) |
|-----------|-------|-------|
| ERP | 7.84 | (dBm) |
| ERP | 0.006 | (W) |
| ERP Limit | 3.00 | (W) |
| MARGIN | 26.93 | (dB) |



3-3. UNII

| Average output Power at antenna input terminal | 10.00 | dBm |
|---|-------------|--------------------|
| Average output Power at antenna input terminal | 10.00 | mW |
| Prediction distance | 20.00 | cm |
| Prediction frequency | 5180 - 5825 | MHz |
| Antenna Gain(typical) | -0.18 | dBi |
| Antenna Gain(numeric) | 0.959 | - |
| Power density at prediction frequency(S) | 0.0019 | mW/cm ² |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000 | mW/cm ² |

2.1091

| EIRP | 9.82 | (dBm) |
|-----------|-------|-------|
| ERP | 7.67 | (dBm) |
| ERP | 0.006 | (W) |
| ERP Limit | 3.00 | (W) |
| MARGIN | 27.10 | (dB) |

Simultaneous transmission operations

| ->Simultaneous MPE 20cm is DTS (0.0020/1.0) + BT (0.0005/1.0) = 0.0025 | < 1 |
|---|-----|
| ->Simultaneous MPE 20cm is UNII (0.0019/1.0) + BT (0.0005/1.0) = 0.0024 | <1 |