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TEST REPORT

FCC MPE Test for MAR120

Certification

APPLICANT
HYUNDAI MOBIS CO., LTD.

REPORT NO.
HCT-RF-2002-FI002

DATE OF ISSUE
February 14, 2020

HCT Co., Ltd.
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-MAR120

Applicant	**HYUNDAI MOBIS CO., LTD.** 203, Teheran-ro, Gangnam-gu, Seoul, 135-977, South Korea
Eut Type Model Name	UNIT ASSY-RR CORNER RADAR MAR120
Date of Receipt	May 28, 2019
Frequency range	76 GHz ~ 77 GHz

Tested by
Kwang Il Yoon (signature)

Technical Manager
Jong Seok Lee (signature)

HCT CO., LTD.
Soo Chan Lee
SooChan Lee / CEO

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	February 14, 2020	Initial Release

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)

RF Exposure Statement

1. Limit

According to § 1.1310, § 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 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. 77G Radar_ Normal Resolution

Max Average EIRP output Power	19.15	dBm
Max Average EIRP output Power	82.22	mW
Prediction distance	20.00	cm
Prediction frequency	76000~77000	MHz
Power density at prediction frequency(S)	0.0164	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

3-2.1091

EIRP	19.15	(dBm)
ERP	17.00	(dBm)
ERP	0.050	(W)
ERP Limit	3.00	(W)
MARGIN	17.77	(dB)

3-1. 77G Radar_ High Resolution

Max Average EIRP output Power	20.71	dBm
Max Average EIRP output Power	117.76	mW
Prediction distance	20.00	cm
Prediction frequency	76000~77000	MHz
Power density at prediction frequency(S)	0.0234	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

3-2.1091

EIRP	20.71	(dBm)
ERP	18.56	(dBm)
ERP	0.072	(W)
ERP Limit	3.00	(W)
MARGIN	16.21	(dB)