HCT CO.,LTD.

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FCC MPE REPORT

Certification

Applicant Name:
Mobile Appliance, Inc.

Address:
Gwanyang-dong-1701~1706, Daerung Techno #15, 401, Simin-daero, Dongan-gu, Anyang-si, Gyeonggi-do, Korea

Date of Issue:
May 08, 2019

Test Site/Location:
HCT CO., LTD., 74,Seoicheon-ro 578beon-gil,Majang-myeo,Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

Report No.: HCT-RF-1905-FC005-R1

FCC ID:	**WHBMBDASHCAMF**
APPLICANT:	**Mobile Appliance, Inc.**

Model:	Mercedes-Benz Dashcam Front
EUT Type:	Mercedes-Benz Dashcam Front
Frequency Range:	2412 MHz - 2462 MHz (DTS), 5775 MHz (UNII)

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 : Se Wook Park
Engineer of Telecommunication testing center

Approved by : Kwon Jeong
Manager of Telecommunication testing center

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-1905-FC005	May 07, 2019	- First Approval Report
HCT-RF-1905-FC005-R1	May 08, 2019	- The Maximum output power was modified to EIRP - Added the 24G Radar RF Exposure

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				
1.34 - 30	614	1.63	*(100)	30
30 - 300	824/f	2.19/f	*(180/ f^2)	30
300 - 1500	27.5	0.073	0.2	30
1500 - 100.000	.....	.....	f/1500	30
	.....	.....	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. DTS

Max Average EIRP output Power	16.00	dBm
Max Average EIRP output Power	39.81	mW
Prediction distance	20.00	cm
Prediction frequency	2412 – 2462	MHz
Power density at prediction frequency(S)	0.008	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

2.1091

EIRP	16.00	(dBm)
ERP	13.85	(dBm)
ERP	0.024	(W)
ERP Limit	3.00	(W)
MARGIN	20.92	(dB)

3-2. UNII

Max Average EIRP output Power	13.00	dBm
Max Average EIRP output Power	19.95	mW
Prediction distance	20.00	cm
Prediction frequency	5775	MHz
Power density at prediction frequency(S)	0.004	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

2.1091

EIRP	13.00	(dBm)
ERP	10.85	(dBm)
ERP	0.01	(W)
ERP Limit	3	(W)
MARGIN	23.92	(dB)

3-3. Radar Front

Max Average EIRP output Power	0.89	dBm
Max Average EIRP output Power	1.227	mW
Prediction distance	20.00	cm
Prediction frequency	24215	MHz
Power density at prediction frequency(S)	0.0002	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

2.1091

EIRP	0.89	(dBm)
ERP	-1.26	(dBm)
ERP	0.001	(W)
ERP Limit	3	(W)
MARGIN	36.03	(dB)

3-4. Radar Rear

Max Average EIRP output Power	2.37	dBm
Max Average EIRP output Power	1.726	mW
Prediction distance	20.00	cm
Prediction frequency	24198	MHz
Power density at prediction frequency(S)	0.0003	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

2.1091

EIRP	2.37	(dBm)
ERP	0.22	(dBm)
ERP	0.001	(W)
ERP Limit	3	(W)
MARGIN	34.55	(dB)