



RF Exposure evaluation

FOR

GRENOPLUS IMATE ALL IN ONE DOCKING STATION (60W)

Model : GP-MB10

Issued to

GRENO TECHNOLOGY (HK) CO., LTD
ROOM 603, 6/F, HANG PONT COMMERCIAL BUILDING, 31 TONKIN STREET,
SHEUNG SHA WAN, KOWLOON, HONGKONG

Issued by
WH Technology Corp.



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1. GENERAL INFORMATION

Applicant : GRENO TECHNOLOGY (HK) CO., LTD
Address : ROOM 603, 6/F, HANG PONT COMMERCIAL BUILDING,
31 TONKIN STREET, SHEUNG SHA WAN, KOWLOON,
HONGKONG
Manufacturer : GRENO TECHNOLOGY (HK) CO., LTD
Address : ROOM 603, 6/F, HANG PONT COMMERCIAL BUILDING,
31 TONKIN STREET, SHEUNG SHA WAN, KOWLOON,
HONGKONG
Factory : Stiger International Trade Investment Co., Ltd
Address : 2 Building, Standard Garden, Taishi Industrial Zone, Dongyong
Town, Nansha District Guangzhou, Guangdong, P.R.China
EUT : Grenoplus iMate All in One Docking Station (60w)
Model Name : GP-MB10
FCC ID : 2AROV-GPMB10
Trade Name : iMate
Model : N/A
Differences

Is here with confirmed to comply with the requirements set out in the FCC Rules and Regulations Part 15 Subpart C and the measurement procedures were according to ANSI C63.10-2013. The said equipment in the configuration described in this report shows the maximum emission levels emanating

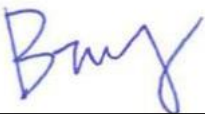
FCC part 15 Subpart C

Receipt Date : 11/01/2018

Final Test Date : 12/30/2018

Tested By:

Nov. 01, 2018
(Date)


Bing Chang/ Engineer

Dec. 30, 2018
(Date)

Reviewed by:


Bell Wei / Manager

Designation Number: TW2954

**EUT Specification**

EUT:	Grenoplus iMate All in One Docking Station (60w)
M/N:	GP-MB10
Frequency band: (Operating)	☐ WLAN:2.142G~2.462GHz ☐ WLAN:5.18G~5.32GHz/5.50GHz~5.70GHz ☐ WLAN:5.745G~5.825GHz ☐ Bluetooth:2.402GHz~2.480GHz ☐ Zigbee:2.405GHz~2.480GHz ☒ Others 110KHz-200KHz
Device category:	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation) ☐ Others ____
Antenna diversity:	☐ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity ☒ Coil Antenna
Antenna Type:	Coil Antenna
Antenna gain:	0dBi

LIST OF TEST AND MEASUREMENT INSTRUMENTS

Equipment	Model	Manufacture	Last Cal.	Next Cal.
Exposure Level Tester	ELT-400	NARDA	Aug. 05, 2018	Aug. 04, 2019
Magnetic field probe 100cm2	B-Field Probe 100 cm2	NARDA	Aug. 05, 2018	Aug. 04, 2019



Applicable Standard

FCC § 1.1307 & 1.1310

According to the item 5.2 of KDB 680106 D01 RF Exposure Wireless Charging Apps V03: Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF evaluation.

- a) Power transfer frequency is less than 1 MHz.
- b) Output power from each primary coil is less than or equal to 15 watts.
- c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
- d) Client device is placed directly in contact with the transmitter.
- e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- f) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

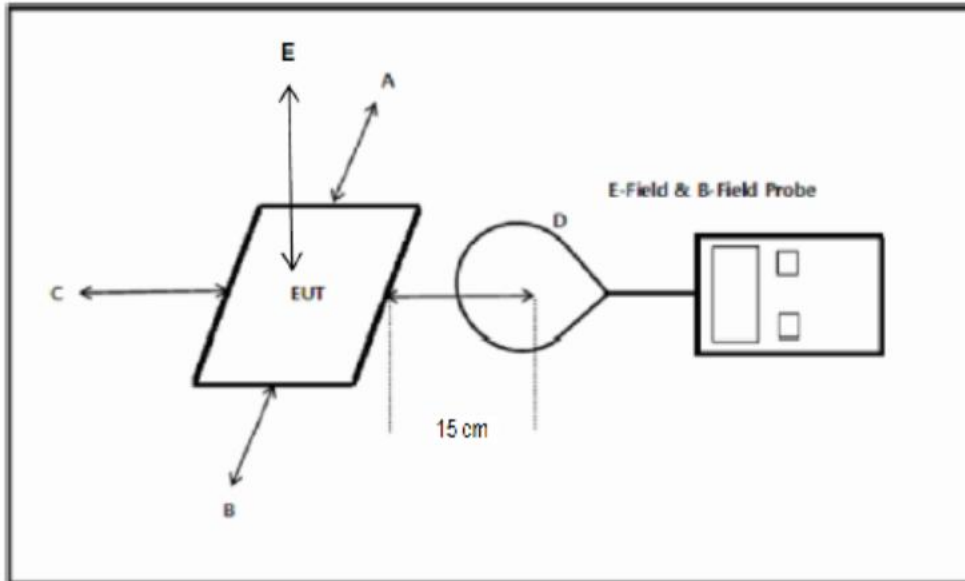
Limits for Maximum Permissible Exposure (MPE)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
(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
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;



EUT Setup:





Test Procedure:

- a) The RF exposure test was performed on 360 degree turn table in anechoic chamber.
- b) The measurement probe was placed at test distance (10cm) which is between the edge of the charger and the geometric centre of probe.
- c) The turn table was rotated 360 degree to search of highest strength.
- d) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- e) The EUT were measured according to the dictates of KDB 680106D01v03

Result:

- a) Power transfer frequency is less than 1 MHz.
Yes, The device operates in the frequency 110kHz-200kHz.
- b) Output power from each primary coil is less than or equal to 15 watts.
Yes, The maximum output power of the primary coil is Max 10W<15W.
- c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
Yes, The transfer system including a charging system with only single primary coils is to detect and allow only between individual of coils.
- d) Client device is placed directly in contact with the transmitter.
Yes, Client device is placed directly in contact with the transmitter.
- e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
No, The EUT Coupling surface area (Type: Cycle)
- f) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
The EUT H-field strengths at 15 cm surrounding the device and 20 cm above the top surface are less than 50% the MPE limit.



TEST DATA

E and H field Strength

E-Filed Strength at 15 cm from the edges surrounding the EUT (V/m)

Frequency Range (MHz)	Position A (V/m) 15cm	Position B (V/m) 15cm	Position C (V/m) 15cm	Position D (V/m) 15cm	Position E (V/m) 20cm	Limits Test (V/m)
0.110-0.200	1.60	1.73	2.14	1.68	2.46	614

H-Filed Strength at 15 cm from the edges surrounding the EUT (A/m)

Frequency Range (MHz)	Position A (A/m) 15cm	Position B (A/m) 15cm	Position C (A/m) 15cm	Position D (A/m) 15cm	Position E (A/m) 20cm	Limits Test (A/m)
0.110-0.200	0.29	0.21	0.31	0.19	0.28	1.63



Testing photo



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