

TEST REPORT

Reference No...... : WTD24D06131645W004
FCC ID : 2APJQ-CC02XX
Applicant..... : KEEPWAY INDUSTRIAL(ASIA)CO.,LTD
Address..... : Flat D,8/F.,SuccessInd.Bld G.,No.17 SheungHeiSt., SanPoKong,
Kowloon, Hongkong, China
Manufacturer : HuaRui Technology(ShenZhen)CO.,Ltd
Address..... : 401, Building 3, No.32, Dafu Road, Zhangge Community, Fucheng
Street, Longhua District, Shenzhen, China
Product..... : Interceptor Solar, Interceptor Pro, Interceptor
Model(s). : Interceptor Solar CC0234, Interceptor Pro CC0227,
Interceptor CC0210
Standards..... : FCC 47CFR Part 2 Subpart J Section 2.1091
Date of Receipt sample : 2024-06-11
Date of Test : 2024-06-12 to 2024-08-22
Date of Issue..... : 2024-09-27
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3. Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD24D06131645W004	2024-06-11	2024-06-12 to 2024-08-22	2024-09-27	Original	-	Valid

4. General Information

4.1. General Description of E.U.T.

Product:	Interceptor Solar, Interceptor Pro, Interceptor
Model(s):	Interceptor Solar CC0234, Interceptor Pro CC0227, Interceptor CC0210
Model Description:	Only the product name, model names, solar battery, display screen are different for different market requirement. The product Interceptor Solar with model Interceptor Solar CC0234 have solar battery and display screen. The product Interceptor Pro with model Interceptor Pro CC0227 have display screen without solar battery. The product Interceptor with model Interceptor CC0210 have no solar battery and display screen. The test sample model was Interceptor Solar CC0234.
Test Sample No.:	1-1/1
WCDMA Band(s):	FDD Band II/IV/V
LTE Band(s):	FDD Band 2/4/5/12/13/25/26
Hardware Version:	Interceptor Solar CC0234: KT899MV04H Interceptor Pro CC0227: KT899MV04M Interceptor CC0210: KT899MV04L
Software Version:	Interceptor Solar CC0234: CC0234K2C2F2X2921087 Interceptor Pro CC0227: CC0227K2C2F2X2921079 Interceptor CC0210: CC0210K2NLF2X2915084

4.2. Details of E.U.T.

Operation Frequency:	WCDMA Band II: 1850~1910MHz WCDMA Band V: 824~849MHz WCDMA Band IV: 1710~1755MHz LTE Band 2: 1850~1910MHz LTE Band 4: 1710~1755MHz LTE Band 5: 824~849MHz LTE Band 12: 699~716MHz LTE Band 13: 777~787MHz LTE Band 25: 1850~1915MHz LTE Band 26(Part 90): 814~824MHz LTE Band 26(Part 22): 824~849MHz
Max. RF output power:	WCDMA Band II: 22.83dBm WCDMA Band V: 22.91dBm WCDMA Band IV: 22.54dBm LTE Band 2: 23.25dBm LTE Band 4: 23.09dBm LTE Band 5: 23.86dBm LTE Band 12: 23.86dBm LTE Band 13: 23.41dBm LTE Band 25: 23.22dBm LTE Band 26(Part 90): 23.16dBm

	LTE Band 26(Part 22): 24.00dBm
Modulation Technology:	WCDMA: BPSK, 16QAM LTE: QPSK, 16QAM
Antenna installation:	External antenna with RP-SMA connector
Antenna Gain:	WCDMA Band II: 2.2dBi WCDMA Band V: 0.2dBi WCDMA Band IV: 1.6dBi LTE Band 2: 2.2dBi LTE Band 4: 1.6dBi LTE Band 5: 0.2dBi LTE Band 12: 0.6dBi LTE Band 13: 0.6dBi LTE Band 25: 2.2dBi LTE Band 26(Part 90): 0.2dBi LTE Band 26(Part 22): 0.2dBi

Note:

#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Ratings: DC 12V

4.3. Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4. Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

4.5. Abnormalities from Standard Conditions

None.

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	FCC Part 2.1091	PASS

6. RF Exposure

Test Requirement: FCC 47CFR Part 2 Subpart J Section 2.1091

Evaluation Method: FCC 47CFR Part 1 Subpart I Section 1.1310,
KDB 447498 D01 General RF Exposure Guidance v06

6.1. Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

6.2. The procedures / limit

Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) 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	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) 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
300-1,500			f/1500	<30
1,500-100,000			1	<30

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

6.3. MPE Calculation Method

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

P = output power to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance, R=20cm, as well as the gain of the used antenna, the RF power density can be obtained

6.4. Radio Frequency Radiation Exposure Evaluation

Band	Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WCDMA Band II	2.2	1.66	22.83	191.87	0.063339	1.0
WCDMA Band V	0.2	1.05	22.91	195.43	0.040707	0.55
WCDMA Band IV	1.6	1.45	22.54	179.47	0.051603	1.0
LTE Band 2	2.2	1.66	23.25	211.35	0.069771	1.0
LTE Band 4	1.6	1.45	23.09	203.70	0.058570	1.0
LTE Band 5	0.2	1.05	23.86	243.22	0.050661	0.55
LTE Band 12	0.6	1.15	23.86	243.22	0.055549	0.47
LTE Band 13	0.6	1.15	23.41	219.28	0.050081	0.52
LTE Band 25	2.2	1.66	23.33	215.28	0.071068	1.0
LTE Band 26 (Part 90)	0.2	1.05	23.16	207.01	0.043120	0.54
LTE Band 26 (Part 22)	0.2	1.05	24.00	251.19	0.052321	0.55

Note:

1. For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band.
2. Chose the maximum power to do MPE analysis.

Conclusion:

RF Exposure is FCC compliant.

=====End of Report=====