Test Report No:
2420117R-RFUSV17S-A

RF EXPOSURE EVALUATION DECLARATION

Product Name	Peplink Pepwave Wireless Product
Brand Name	peplink PEPWAVE
Model No.	MAX BR2 BR2 MAX-BR2-LTE-US-T-PRM
FCC ID	U8G-P1MT03A
Applicant´s Name / Address	PISMO LABS TECHNOLOGY LIMITED A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle Peak Road, Cheung Sha Wan, Hong Kong
Manufacturer's Name	PISMO LABS TECHNOLOGY LIMITED
Test Method Requested, Standard	FCC CFR Title 47 Part 2.1091 Radiofrequency radiation exposure evaluation: mobile devices.
Verdict Summary	IN COMPLIANCE
Documented by April Chen	April Chen
Approved by Jack Hsu	Jack Hsu
Approved by Tim Sung	Tim Sung
Date of Receipt	2024/02/05
Date of Issue	2024/03/29
Report Version	V1.0

INDEX

page

Competences and Guarantees....3
General Conditions....3
Revision History....4
1. General Information....5
1.1. EUT Description....5
1.2. Testing Location Information....6
2. RF Exposure Evaluation....7
2.1. Test Limit....7
2.2. Test Result of RF Exposure Evaluation....9

Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.
In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

General Conditions

1. The test results relate only to the samples tested.
2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	2024/03/29

1. General Information

1.1. EUT Description

Product Name	Peplink Pepwave Wireless Product
Brand Name	peplink PEPWAVE
Model No.	MAX BR2 BR2 MAX-BR2-LTE-US-T-PRM

Note: For more detailed information please refer to report No.: 2420117R-RFUSV01S-A and 2420117R-RFUSV03S-A.

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
WiFi 2.4 GHz	2400 ~ 2483.5	2412 ~ 2462	802.11b: DSSS 802.11g/n/ac: OFDM
WiFi 5 GHz	5150 ~ 5250 5725 ~ 5850	5180 ~ 5240 5745 ~ 5825	802.11g/n/ac: OFDM

The EUT contains WWAN module, and the detail as below.

Brand Name	Model	FCC ID	Bands	Operating Frequency Range (MHz)	Modulation Type
Quectel	EC25-AFXD	XMR202008EC25AFXD	WCDMA Band 2	Uplink: 1850 ~ 1910 Downlink: 1930 ~ 1990	RMC / HSDPA / HSUPA / DC-HSDPA / HSPA+
			WCDMA Band 4	Uplink: 1710 ~ 1755 Downlink: 2110 ~ 2115	
			WCDMA Band 5	Uplink: 824 ~ 849 Downlink: 869 ~ 894	
			Bands	Operating Frequency Range (MHz)	Modulation Type
			LTE Band 2	Uplink: 1850 ~ 1910 Downlink: 1930 ~ 1990	QPSK / 16QAM
			LTE Band 4	Uplink: 1710 ~ 1755 Downlink: 2110 ~ 2115	
			LTE Band 5	Uplink: 824 ~ 849 Downlink: 869 ~ 894	
			LTE Band 12	Uplink: 698 ~ 716 Downlink: 729 ~ 746	
			LTE Band 13	Uplink: 777 ~ 787 Downlink: 746 ~ 756	
			LTE Band 14	Uplink: 788 ~ 798 Downlink: 758 ~ 768	
			LTE Band 66	Uplink: 1710 ~ 1780 Downlink: 2110 ~ 2200	
			LTE Band 71	Uplink: 663 ~ 698 Downlink: 617 ~ 652	

1.2. Testing Location Information

USA	FCC Registration Number: TW0033
Canada	CAB Identifier Number: TW3023 / Company Number: 26930

Site Description	Accredited by TAF
	Accredited Number: 3023

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
	Linkou Laboratory
Address	No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C.
Performed Location	No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C.
Phone Number	+886-3-275-7255
Fax Number	+886-3-327-8031

2. RF Exposure Evaluation

2.1. Test Limit

(A) Test Limit for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
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
300-1500	-	-	f/300	<6
1500-100,000	-	-	5	<6

(B) Test Limit for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (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

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

Power Density (S) is calculated by the following formula:

$$S=(P*G)/4\pi R^2$$

where:

S = power density (in appropriate units, e.g. mW/ cm^2)

P = power input 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

π = 3.1416

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

2.2. Test Result of RF Exposure Evaluation

Band	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density at R = 22 cm (mW/cm2)	Limit (mW/cm2)
2.4 GHz WLAN	26.730	470.977	0.077	1
5 GHz WLAN U-NII 1	29.300	851.138	0.140	1
5 GHz WLAN U-NII 3	33.503	2240.268	0.368	1

Note: The conducted output power is refer to report No.: 2420117R-RFUSV01S-A and 2420117R-RFUSV03S-A from the DEKRA.

Band	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density at R = 22 cm (mW/cm2)	Limit (mW/cm2)
WCDMA Band 2	27.390	548.277	0.090	1.000
WCDMA Band 4	26.980	498.884	0.082	1.000
WCDMA Band 5	27.920	619.441	0.102	0.549
LTE B2	27.390	548.277	0.090	1.000
LTE B4	26.980	498.884	0.082	1.000
LTE B5	27.920	619.441	0.102	0.549
LTE B12	28.580	721.107	0.119	0.466
LTE B13	28.660	734.514	0.121	0.518
LTE B14	28.780	755.092	0.124	0.525
LTE B66	26.980	498.884	0.082	1.000
LTE B71	28.440	698.232	0.115	0.442

Co-location
Conclusion: The formula of calculated the MPE is: CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1 CPD = Calculation power density LPD = Limit of power density WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN module 1: WCDMA function + WWAN module 2: WCDMA function = 0.077 + 0.368 + 0.185 + 0.185 = 0.815, therefore the maximum calculations of above situations are less than the “1” limit. WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN module 1: LTE function + WWAN module 2: LTE function = 0.077 + 0.368 + 0.260 + 0.260 = 0.965, therefore the maximum calculations of above situations are less than the “1” limit. WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN module 1: WCDMA function + WWAN module 2: LTE function = 0.077 + 0.386 + 0.185 + 0.260 = 0.890, therefore the maximum calculations of above situations are less than the “1” limit.

Note：

1 The above EUT information is declared by the manufacturer.

2 The results are evaluated using the maximum power.

3 The EUT has two of the same WWAN modules.