

Test Report No:
2650088R-RFUSV17S-A

RF EXPOSURE EVALUATION DECLARATION

Product Name	Dual-WAN Security Router
Brand Name	DrayTek
Model No.	Vigor2928be, Vigor2867be, Vigor1220be
FCC ID	VGY2928BE
Applicant's Name / Address	Draytek Corporation No. 26, Fu Shing Road, Hukou County, Hsin-Chu Industrial Park, Hsinchu, Taiwan
Manufacturer's Name / Address	Draytek Corporation No. 26, Fu Shing Road, Hukou County, Hsin-Chu Industrial Park, Hsinchu, Taiwan
Test Method Requested, Standard	FCC CFR Title 47 Part 2.1091 Radiofrequency radiation exposure evaluation: mobile devices.
Verdict Summary	IN COMPLIANCE
Documented By	 Hailey Peng
Approved By	 Rueyyan Lin
Date of Receipt	May 07, 2026
Date of Issue	Sep. 18, 2026
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.....	8

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.

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

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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	Sep. 18, 2026

1. General Information

1.1. EUT Description

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
Wi-Fi 2.4 GHz	2400 ~ 2483.5	2412 ~ 2462	802.11b: DSSS 802.11g/n, VHT: OFDM 802.11ax/be: OFDMA
Wi-Fi 5 GHz	5150 ~ 5250 5250 ~ 5350 5470 ~ 5725 5725 ~ 5850	5180 ~ 5240 5260 ~ 5320 5500 ~ 5720 5745 ~ 5825	802.11a/n/ac: OFDM 802.11ax/be: OFDMA

The difference for each model is shown as below:

Model No.	WAN			Color of the Top Cover
	DSL	SFP+	XGS-PON	
Vigor 2867be	V(vdsl2/35b)	X	X	White
Vigor 2928be	X	V	X	Black
Vigor 1220be	X	X	V	White

"V" indicates available, and "X" indicates not available.

<Wi-Fi 2.4 GHz>

Antenna Information					
Ant.	Brand Name	Model No.	Type	Gain (dBi)	Directional Gain (dBi)
1	HL GLOBAL	PC2455WOC01DR-P3M48-BZKLB145IC3	PCB	4.20	9.79
2	HL GLOBAL	PC2455WOC02DR-P3M48-BZK-LB91IC1	PCB	5.10	
3	INPAQ	RFDPA191700SBLB804	Dipole	2.77	
4	INPAQ	RFDPA191700SBLB804	Dipole	2.77	

$$\text{Directional Gain} = 10 \log \left[\left(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20} \right)^2 / N_{\text{Ant}} \right]$$

<Wi-Fi 5 GHz>

Antenna Information											
Ant.	Brand Name	Model No.	Type	Gain (dBi)				Directional Gain (dBi)			
				U-NII 1	U-NII 2A	U-NII 2C	U-NII 3	U-NII 1	U-NII 2A	U-NII 2C	U-NII 3
1	HL GLOBAL	PC2455WOC01DR-P3M 48-BZKLB145IC3	PCB	4.90	5.40	5.40	5.50	10.41	10.47	10.96	10.50
2	HL GLOBAL	PC2455WOC02DR-P3M 48-BZK-LB91IC1	PCB	4.30	4.00	4.80	5.00				
3	INPAQ	RFDPA191700SBLB804	Dipole	4.16	4.16	4.78	3.64				
4	INPAQ	RFDPA191700SBLB804	Dipole	4.16	4.16	4.78	3.64				
5	HL GLOBAL	PC55WOC02DR-P3M48 -BZKLO73IC3	PCB	4.10	4.40	4.40	3.90	-- (RX only)			

$$\text{Directional Gain} = 10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{\text{Ant}}]$$

Note: The above EUT information is declared by the manufacturer.

1.2. Testing Location Information

Testing Location Information		
Test Laboratory : DEKRA Testing and Certification Co., Ltd.		
1 (TAF: 3024)	ADD: No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISCED.	
2 (TAF: 3024)	ADD: No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISCED.	
Test site number for address 1 includes HC-SR02 and HC-CB10. Test site number for address 2 includes HC-CB02, HC-CB04, HC-SR10 and HC-SR12.		

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/ cm ²)	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/ cm ²)	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/ cm²)

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

Exposure Environment: General Population / Uncontrolled Exposure

<Non-beamforming function>

Evaluation Mode	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Test Result (PASS/FAIL)
Wi-Fi 2.4 GHz	35.008	3168.108	0.438	1.000	PASS
Wi-Fi 5 GHz UNII-1	30.511	1124.864	0.155	1.000	PASS
Wi-Fi 5 GHz UNII-2A	28.138	651.328	0.090	1.000	PASS
Wi-Fi 5 GHz UNII-2C	29.018	797.627	0.110	1.000	PASS
Wi-Fi 5 GHz UNII-3	35.450	3507.519	0.485	1.000	PASS

Distance (cm): 24 for Maximum Permissible Exposure.

<Beamforming function>

Evaluation Mode	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Test Result (PASS/FAIL)
Wi-Fi 2.4 GHz	30.945	1243.083	0.172	1.000	PASS
Wi-Fi 5 GHz UNII-1	30.001	1000.230	0.138	1.000	PASS
Wi-Fi 5 GHz UNII-2A	27.188	523.359	0.072	1.000	PASS
Wi-Fi 5 GHz UNII-2C	28.558	717.464	0.099	1.000	PASS
Wi-Fi 5 GHz UNII-3	34.430	2773.320	0.383	1.000	PASS

Distance (cm): 24 for Maximum Permissible Exposure.

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 Wi-Fi 2.4 GHz + Wi-Fi 5 GHz = 0.923, 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 based on the maximum power.