

# RF Exposure Evaluation Report

**Product** : BE5100 Dual-Band Wi-Fi 7 Router(2.5GE)  
**Trade mark** : Tenda  
**Model/Type reference** : RE6L Pro,TE6L Pro  
**Serial Number** : N/A  
**Report Number** : EED32Q81740304  
**Date of Issue** : Dec. 09, 2024  
**Test Standards** : EN 50385:2017  
EN IEC 62311:2020  
BS EN 50385:2017  
BS EN IEC 62311:2020  
**Test result** : PASS

Prepared for:

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1 Version

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### 3 General Information

#### 3.1 Client Information

Applicant:	SHENZHEN TENDA TECHNOLOGY CO., LTD.
Address of Applicant:	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052
Manufacturer:	SHENZHEN TENDA TECHNOLOGY CO., LTD.
Address of Manufacturer:	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052

#### 3.2 General Description of EUT

Product Name:	BE5100 Dual-Band Wi-Fi 7 Router(2.5GE)	
Model No.(EUT):	RE6L Pro,TE6L Pro	
Test Mode No.:	RE6L Pro	
Trade mark:	Tenda	
EUT Supports Radios application:	2.4G Wi-Fi,5G Wi-Fi Band 1,2,4	
Sample Type:	Fixed production	
Test Power Grade:	Default(manufacturer declare)	
Test Software of EUT:	QATool_Dbg.exe(manufacturer declare)	
Power Supply:	Adapter 1:	Model:TEKA-TC120150EU Input:100-240V~50/60Hz,0.5A MAX Output:12.0V,1.5A,18.0W
	Adapter 2:	Model:TEKA-TC120150BS Input:100-240V~50/60Hz,0.5A MAX Output:12.0V,1.5A,18.0W
Sample Received Date:	Nov. 04, 2024	
Sample tested Date:	Nov. 04, 2024 to Nov. 26, 2024	
Remark: Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.  Model No.: RE6L Pro,TE6L Pro Only the model RE6L Pro was tested,their electrical circuit design, layout, components used and internal wiring are identical, Only the Model is different.		

### 3.3 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 3368 3668 Fax: +86 (0) 755 3368 3385

No tests were sub-contracted.

### 3.4 Deviation from Standards

None.

### 3.5 Abnormalities from Standard Conditions

None.

### 3.6 Other Information Requested by the Customer

None.

## 4 Technical Requirements Specification in EN 50385 & BS EN 50385

### 4.1 General Description of Applied Standards

This product standard is related to human exposure to radiofrequency electromagnetic fields transmitted by base station equipment in the frequency range 110 MHz to 100 GHz.

The object is to assess the compliance of such equipment with the general public basic restrictions (directly or indirectly via compliance with reference levels) and the workers' exposure limit values (directly or indirectly via compliance with action levels), when it is placed on the market.

### 4.2 RF Exposure Evaluation

#### Limit

For equipment intended for use by the general public the relevant exposure restrictions in Council Recommendation 1999/519/EC shall be applied

Reference levels for electric, magnetic and electromagnetic fields  
(0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density $S_{eq}$ (W/m <sup>2</sup> )
0-1 Hz	—	$3,2 \times 10^4$	$4 \times 10^4$	—
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—
8-25 Hz	10 000	$4 000/f$	$5 000/f$	—
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	—
0,8-3 kHz	$250/f$	5	6,25	—
3-150 kHz	87	5	6,25	—
0,15-1 MHz	87	$0,73/f$	$0,92/f$	—
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	—
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^2$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

#### Notes:

1.  $f$  as indicated in the frequency range column.
2. For frequencies between 100 kHz and 10 GHz,  $S_{eq}$ ,  $E^2$ ,  $H^2$ , and  $B^2$  are to be averaged over any six-minute period.
3. For frequencies exceeding 10 GHz,  $S_{eq}$ ,  $E^2$ ,  $H^2$ , and  $B^2$  are to be averaged over any  $68/f^{1,05}$  -minute period ( $f$  in GHz).
4. No E-field value is provided for frequencies < 1 Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 25 kV/m. Spark discharges causing stress or annoyance should be avoided.



### 4.3 Human Exposure Assessment

Exposure evaluation	
<p>Given</p> $E = \frac{\sqrt{30 \times TP}}{D}$ $D = \frac{\sqrt{30 \times TP}}{E}$	<p>Where:</p> <ul style="list-style-type: none"> <li>• E: E field strength</li> <li>• TP: Transmitted power in watt</li> <li>• D: Distance from the transmitting antenna in meter</li> </ul>

Frequency	EIRP (dBm)	TP (W)	D (m)	Electric Field (V/m)	Limit of Electric Field (V/m)	Ratio	Result
@2.4GHz	18.85	0.0767	0.2	7.5863	61	0.12	Pass
@5GHz	18.96	0.0787	0.2	7.6830	61	0.13	Pass

Note: The test data refer to the report of EED32Q81740301, EED32Q81740302 and EED32Q81740303, and only the worst case data was recorded in the report.

For Simultaneous Transmission:

As MPE Ratio (2.4G Wi-Fi+5G Wi-Fi)= $0.12^2+0.13^2=0.0313 < 1$ , it's deemed to fulfil the RF exposure requirement.

#### Conclusion:

→  $E = 7.6830 \text{ V/m (max)}$  is the E-Field strength when safety distance between the EUT and human body is 0.2m, which is below 61V/m as required 1999/519/EC Annex III Table 2

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