

# **FCC RF EXPOSURE REPORT**

**FCC ID: QISHG8245HE**

**Project No. : 1604C212**  
**Equipment : GPON Terminal**  
**Model : EchoLife HG8245H**  
**Applicant : Huawei Technologies Co.,Ltd.**  
**Address : Administration Building, Headquarters of  
Huawei Technologies Co., Ltd., Bantian,  
Longgang District, Shenzhen**

**According: : FCC Guidelines for Human Exposure IEEE  
C95.1**

**B T L I N C .**

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## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	N/A	N/A	Dipole	N/A	5
2	N/A	N/A	Dipole	N/A	5

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = G<sub>ANT</sub>**, that is Directional gain=5.

(2) ANT 1 was the worst case for 1TX.

Operating Mode	1TX	2TX
TX Mode		
802.11b	V (ANT 1)	-
802.11g	V (ANT 1)	-
802.11n(20MHz)	-	V (ANT 1 + ANT 2)
802.11n(40MHz)	-	V (ANT 1 + ANT 2)

## TEST RESULTS

EUT :	GPON Terminal	Model Name :	EchoLife HG8245H
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX B MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
5	3.1623	19.18	82.7942	0.05211	1	Complies
5	3.1623	19.51	89.3305	0.05623	1	Complies
5	3.1623	20.52	112.7197	0.07095	1	Complies

EUT :	GPON Terminal	Model Name :	EchoLife HG8245H
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX G MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
5	3.1623	26.27	423.6430	0.26666	1	Complies
5	3.1623	27.38	547.0160	0.34431	1	Complies
5	3.1623	26.83	481.9478	0.30335	1	Complies

EUT :	GPON Terminal	Model Name :	EchoLife HG8245H
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
5	3.1623	27.99	629.5062	0.39623	1	Complies
5	3.1623	29.73	939.7233	0.59149	1	Complies
5	3.1623	28.93	781.6278	0.49198	1	Complies

EUT :	GPON Terminal	Model Name :	EchoLife HG8245H
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_ Total /CH03, CH06, CH09		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
5	3.1623	24.58	287.0781	0.18070	1	Complies
5	3.1623	29.56	903.6495	0.56879	1	Complies
5	3.1623	28.15	653.1306	0.41110	1	Complies

Note: the calculated distance is 20 cm.