

FCC RF EXPOSURE REPORT

FCC ID: QISDG8045

Project No. : 1707C303
Equipment : VDSL Home Gateway
Model : EchoLife DG8045
Applicant : Huawei Technologies Co.,Ltd.
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

According: : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091

B T L I N C .

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, China.
TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

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

Group 1

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)	Note
1		81800T384	PCB	N/A	2	TX/RX
2		81800T385	PCB	N/A	2	TX/RX
3		81800T385	PCB	N/A	2	RX

Group 2

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)	Note
1		G009-20655-A	PCB	N/A	2	TX/RX
2		G009-20656-A	PCB	N/A	2	TX/RX
3		G009-20656-A	PCB	N/A	2	RX

1. The EUT incorporates a MIMO function. Physically, the EUT provides two transmitters and three receivers (2T3R).
2. Only different for brand name for these two group antennas.

TEST RESULTS

EUT:	VDSL Home Gateway	Model Name :	EchoLife DG8045
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX B Mode_CH01/06/11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	20.05	101.1579	0.03191173	1	Complies
2	1.5849	19.94	98.6279	0.03111361	1	Complies
2	1.5849	19.93	98.4011	0.03104205	1	Complies

EUT:	VDSL Home Gateway	Model Name :	EchoLife DG8045
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX G Mode_CH01/06/11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	27.31	538.2698	0.16980496	1	Complies
2	1.5849	26.87	486.4072	0.15344416	1	Complies
2	1.5849	26.88	487.5285	0.15379789	1	Complies

EUT:	VDSL Home Gateway	Model Name :	EchoLife DG8045
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N20 Mode_CH01/06/11_ANT 1+ANT2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	28.64	731.1391	0.23064836	1	Complies
2	1.5849	27.46	557.1857	0.17577227	1	Complies
2	1.5849	26.47	443.6086	0.13994274	1	Complies

EUT:	VDSL Home Gateway	Model Name :	EchoLife DG8045
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N40 Mode_CH03/06/09_ANT 1+ANT2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	25.53	357.2728	0.11270686	1	Complies
2	1.5849	25.23	333.4264	0.10518417	1	Complies
2	1.5849	25.66	368.1290	0.11613159	1	Complies

Note: the calculated distance is 20 cm.