

FCC RF EXPOSURE REPORT

FCC ID: Q87-RE4100W

Project No. : 1411127
Equipment : Wi-Fi repeater
Model : RE4100W
Applicant : Linksys LLC.
Address : 121 Theory Drive, Irvine, California, 92617,
United States of America

Accordinging: : 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

2.4G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	N/A	N/A	Internal	N/A	1.00
2	N/A	N/A	Internal	N/A	1.00

5G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	N/A	N/A	Internal	N/A	2.00
2	N/A	N/A	Internal	N/A	2.00

TEST RESULTS

2.4G

EUT :	Wi-Fi repeater	Model Name :	RE4100W
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 ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
1.00	1.2589	23.59	228.5599	0.05727306	1	Complies
1.00	1.2589	26.91	490.9079	0.12301282	1	Complies
1.00	1.2589	24.88	307.6097	0.07708154	1	Complies

EUT :	Wi-Fi repeater	Model Name :	RE4100W
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 ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
1.00	1.2589	21.49	140.9289	0.03531428	1	Complies
1.00	1.2589	25.31	339.6253	0.08510408	1	Complies
1.00	1.2589	22.11	162.5549	0.04073337	1	Complies

EUT :	Wi-Fi repeater	Model Name :	RE4100W
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 ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
1.00	1.2589	23.17	207.4914	0.05199366	1	Complies
1.00	1.2589	27.55	568.8529	0.14254447	1	Complies
1.00	1.2589	24.51	282.4880	0.07078649	1	Complies

EUT :	Wi-Fi repeater	Model Name :	RE4100W
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 ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
1.00	1.2589	22.05	160.3245	0.04017449	1	Complies
1.00	1.2589	25.95	393.5501	0.09861668	1	Complies
1.00	1.2589	23.25	211.3489	0.05296029	1	Complies

Band 1

EUT :	Wi-Fi repeater	Model Name :	RE4100W
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX A MODE /CH36, CH40, CH48		

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
2.00	1.5849	17.86	61.0942	0.01927305	1	Complies
2.00	1.5849	18.22	66.3743	0.02093873	1	Complies
2.00	1.5849	18.14	65.1628	0.02055656	1	Complies

EUT :	Wi-Fi repeater	Model Name :	RE4100W
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total /CH36, CH40, CH48		

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
2.00	1.5849	16.52	44.8745	0.01415632	1	Complies
2.00	1.5849	20.77	119.3988	0.03766608	1	Complies
2.00	1.5849	21.26	133.6596	0.04216483	1	Complies

EUT :	Wi-Fi repeater	Model Name :	RE4100W
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_ Total /CH38, CH46		

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
2.00	1.5849	15.03	31.8420	0.01004501	1	Complies
2.00	1.5849	20.54	113.2400	0.03572320	1	Complies

Band 4

EUT :	Wi-Fi repeater	Model Name :	RE4100W
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX A MODE /CH149, CH157, CH165		

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
2.00	1.5849	18.60	72.4436	0.02285338	1	Complies
2.00	1.5849	20.25	105.9254	0.03341569	1	Complies
2.00	1.5849	19.28	84.7227	0.02672701	1	Complies

EUT :	Wi-Fi repeater	Model Name :	RE4100W
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total /CH149, CH157, CH165		

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
2.00	1.5849	17.52	56.4937	0.01782175	1	Complies
2.00	1.5849	21.23	132.7394	0.04187457	1	Complies
2.00	1.5849	21.09	128.5287	0.04054622	1	Complies

EUT :	Wi-Fi repeater	Model Name :	RE4100W
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total /CH151, CH159		

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
2.00	1.5849	19.58	90.7821	0.02863851	1	Complies
2.00	1.5849	21.14	130.0170	0.04101572	1	Complies

Note: the calculated distance is 20 cm.