

FCC RF EXPOSURE REPORT

FCC ID: NDD9564881702

Project No. : 1703214
Equipment : Dualband WiFi Router
Test Model : BR-6488ACL
Series Model : BR-6488AC, RG12S, EW-7488AC,
EW-7488WAP, RG12, RE12S, RE12, RG15S,
RG15, RE15S, RE15
Applicant : EDIMAX TECHNOLOGY CO., LTD.
Address : No.278, Xinhua 1st Rd., Neihu Dist., Taipei City,
Taiwan
According: : FCC Guidelines for Human Exposure IEEE
C95.1

Technical Manager

:



(Herbert Liu)

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 Band:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	Master Wave	98202PIPF000	Dipole	IPEX	3.86	NA
2	Master Wave	98202PIPF001	Dipole	IPEX	3.83	NA

5G Band:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)		Note
					Band 1	Band 4	
1	Master Wave	98202PIPF000	Dipole	IPEX	4.4	4.18	NA
2	Master Wave	98202PIPF001	Dipole	IPEX	4.38	4.13	NA

TEST RESULTS

2.4G:

Non-Beamforming

Test Mode :	TX B Mode /CH01, CH06, CH11
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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
3.86	2.4322	19.75	94.4061	0.04570360	1	Complies
3.86	2.4322	19.79	95.2796	0.04612649	1	Complies
3.86	2.4322	19.6	91.2011	0.04415200	1	Complies

Test Mode :	TX G Mode /_ Total CH01, CH06, CH11
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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
3.86	2.4322	28.08	642.6877	0.31113608	1	Complies
3.86	2.4322	29.58	907.8205	0.43949139	1	Complies
3.86	2.4322	29.22	835.6030	0.40452966	1	Complies

Test Mode :	TX N-20M Mode_ Total /CH01, CH06, CH11
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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
3.86	2.4322	27.63	579.4287	0.28051131	1	Complies
3.86	2.4322	29.44	879.0225	0.42554978	1	Complies
3.86	2.4322	28.57	719.4490	0.34829751	1	Complies

Test Mode :	TX N-40M Mode_ Total /CH03, CH06, CH09
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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
3.86	2.4322	26.44	440.5549	0.21328012	1	Complies
3.86	2.4322	27.96	625.1727	0.30265675	1	Complies
3.86	2.4322	27.83	606.7363	0.29373140	1	Complies

Beamforming

Test Mode :	TX N-20M Mode_ Total /CH01, CH06, CH11
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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
3.86	2.4322	28.52	711.2135	0.34431058	1	Complies
3.86	2.4322	29.12	816.5824	0.39532144	1	Complies
3.86	2.4322	29.04	801.6781	0.38810601	1	Complies

Test Mode :	TX N-40M Mode_ Total /CH03, CH06, CH09
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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
3.86	2.4322	27.34	542.0009	0.26239187	1	Complies
3.86	2.4322	28.86	769.1304	0.37234915	1	Complies
3.86	2.4322	28.73	746.4488	0.36136856	1	Complies

5G:

Non-Beamforming

Test Mode :	UNII-1/TX A Mode _ Total /CH36, CH40, CH48
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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
4.4	2.7542	22.78	189.6706	0.10398013	1	Complies
4.4	2.7542	25.00	316.2278	0.17336059	1	Complies
4.4	2.7542	24.78	300.6076	0.16479741	1	Complies

Test Mode :	UNII-1/TX N20 Mode _ Total /CH36, CH40, CH48
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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
4.4	2.7542	22.62	182.8100	0.10021907	1	Complies
4.4	2.7542	24.93	311.1716	0.17058874	1	Complies
4.4	2.7542	24.78	300.6076	0.16479741	1	Complies

Test Mode :	UNII-1/TX N40 Mode _ Total /CH38, CH46
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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
4.4	2.7542	20.21	104.9542	0.05753742	1	Complies
4.4	2.7542	24.93	311.1716	0.17058874	1	Complies

Test Mode :	UNII-1/TX AC80 Mode _ Total /CH42
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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
4.4	2.7542	19.35	86.0994	0.04720091	1	Complies

Test Mode :	UNII-3/TX A Mode _Total / CH149,CH157,CH165
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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
4.18	2.6182	22.16	164.4372	0.08569399	1	Complies
4.18	2.6182	21.67	146.8926	0.07655091	1	Complies
4.18	2.6182	20.96	124.7384	0.06500554	1	Complies

Test Mode :	UNII-3/TX N20 Mode _Total / CH149,CH157,CH165
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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
4.18	2.6182	22.78	189.6706	0.09884401	1	Complies
4.18	2.6182	22.50	177.8279	0.09267239	1	Complies
4.18	2.6182	21.35	136.4583	0.07111322	1	Complies

Test Mode :	UNII-3/TX N40 Mode _Total / CH151,CH159
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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
4.18	2.6182	21.62	145.2112	0.07567464	1	Complies
4.18	2.6182	21.01	126.1828	0.06575827	1	Complies

Test Mode :	UNII-3/TX AC80 Mode _Total / CH155
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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
4.18	2.6182	21.71	148.2518	0.07725923	1	Complies

Beamforming

Test Mode :	UNII-1/TX N20 Mode _Total /CH36, CH40, CH48
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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
4.4	2.7542	22.78	189.6706	0.10398013	1	Complies
4.4	2.7542	25.00	316.2278	0.17336059	1	Complies
4.4	2.7542	24.78	300.6076	0.16479741	1	Complies

Test Mode :	UNII-1/TX N40 Mode _Total /CH38, CH46
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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
4.4	2.7542	21.59	144.2115	0.07905883	1	Complies
4.4	2.7542	22.79	190.1078	0.10421983	1	Complies

Test Mode :	UNII-1/TX AC80 Mode _Total /CH42
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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
4.4	2.7542	24.13	258.8213	0.14188954	1	Complies

Test Mode :	UNII-3/TX N20 Mode _Total / CH149,CH157,CH165
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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
4.18	2.6182	22.16	164.4372	0.08569399	1	Complies
4.18	2.6182	21.67	146.8926	0.07655091	1	Complies
4.18	2.6182	20.96	124.7384	0.06500554	1	Complies

Test Mode :	UNII-3/TX N40 Mode _Total / CH151,CH159
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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
4.18	2.6182	23.81	240.4363	0.12529980	1	Complies
4.18	2.6182	23.88	244.3431	0.12733576	1	Complies

Test Mode :	UNII-3/TX AC80 Mode _Total / CH155
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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
4.18	2.6182	22.81	190.9853	0.09952917	1	Complies

The calculated distance is 20 cm.

COLLOCATED POWER DENSITY CACULATIONS

So for 2.4G+5G simultaneous transmission:

$$0.43949139/1+0.17336059/1=0.61285198<1$$