

FCC RF EXPOSURE REPORT

FCC ID: KA2IR813B1

Project No. : 1505C119
Equipment : AC750 Dual Band Wi-Fi Router
Model : DIR-813
Applicant : D-Link Corporation
Address : No.289, Sinhu 3rd Rd., Neihu District, Taipei
City 114,
Taiwan, R.O.C.

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:

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

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	P/N	Antenna Type	Length	Gain (dBi)	Note
1		290-20205	Dipole	185mm	3.68	2.4G
2		290-20174	Dipole	80mm	3.89	2.4G

5G

Ant.	Brand	P/N	Antenna Type	Length	Gain (dBi)	Note
1		290-20206	Dipole	120mm	4.60	5G

TEST RESULTS

2.4G

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature :	26 °C	Relative Humidity:	56 %
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
3.89	2.4491	24.3	269.1535	0.13120500	1	Complies
3.89	2.4491	27.41	550.8077	0.26850376	1	Complies
3.89	2.4491	24.73	297.1666	0.14486063	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature :	26 °C	Relative Humidity:	56 %
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
3.89	2.4491	25.46	351.5604	0.17137614	1	Complies
3.89	2.4491	29.63	918.3326	0.44766214	1	Complies
3.89	2.4491	24.51	282.4880	0.13770521	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	26 °C	Relative Humidity:	56 %
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
3.89	2.4491	22.3	169.8244	0.08278476	1	Complies
3.89	2.4491	29.73	939.7233	0.45808953	1	Complies
3.89	2.4491	22.45	175.7924	0.08569399	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	26 °C	Relative Humidity:	56 %
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
3.89	2.4491	20.35	108.3927	0.05283849	1	Complies
3.89	2.4491	23.71	234.9633	0.11453820	1	Complies
3.89	2.4491	20.87	122.1800	0.05955941	1	Complies

Band 1

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
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
4.6	2.8840	16.7	46.7735	0.02685038	1	Complies
4.6	2.8840	15.91	38.9942	0.02238465	1	Complies
4.6	2.8840	15.84	38.3707	0.02202675	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
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
4.6	2.8840	14.39	27.4789	0.01577431	1	Complies
4.6	2.8840	15.76	37.6704	0.02162471	1	Complies
4.6	2.8840	15.75	37.5837	0.02157498	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
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
4.6	2.8840	13.06	20.2302	0.01161316	1	Complies
4.6	2.8840	18.54	71.4496	0.04101572	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC20 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
4.6	2.8840	15.54	35.8096	0.02055656	1	Complies
4.6	2.8840	16.04	40.1791	0.02306484	1	Complies
4.6	2.8840	15.86	38.5478	0.02212842	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC40 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
4.6	2.8840	12.88	19.4089	0.01114167	1	Complies
4.6	2.8840	18.47	70.3072	0.04035993	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC80 MODE_ Total /CH42		

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
4.6	2.8840	12.85	19.2752	0.01106497	1	Complies

Band 4

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
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
4.6	2.8840	15.68	36.9828	0.02123002	1	Complies
4.6	2.8840	18.46	70.1455	0.04026710	1	Complies
4.6	2.8840	17.66	58.3445	0.03349272	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
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
4.6	2.8840	14.19	26.2422	0.01506435	1	Complies
4.6	2.8840	18.53	71.2853	0.04092139	1	Complies
4.6	2.8840	17.74	59.4292	0.03411539	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M 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
4.6	2.8840	12.12	16.2930	0.00935299	1	Complies
4.6	2.8840	17.87	61.2350	0.03515203	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC20 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
4.6	2.8840	14.07	25.5270	0.01465380	1	Complies
4.6	2.8840	18.91	77.8037	0.04466325	1	Complies
4.6	2.8840	17.87	61.2350	0.03515203	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC40 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
4.6	2.8840	11.90	15.4882	0.00889100	1	Complies
4.6	2.8840	17.86	61.0942	0.03507118	1	Complies

EUT :	AC750 Dual Band Wi-Fi Router	Model Name :	DIR-813
Temperature:	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC80 MODE_ Total /CH155		

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
4.6	2.8840	10.41	10.9901	0.00630885	1	Complies

Note: the calculated distance is 20 cm.