MPE ESTIMATION

FCC ID: 2AMLI-UM310N

1, Limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm ²)	Averaging time(minutes)	
300MHz1.5GHz	F/1500	30	
1.5GHz100GHz	1.0	30	

Note: F= Frequency in MHz

2, Estimation Result

For antenna 1:

Mode	Max PK Output	Tune Up	Max Tune Up	Antenna	Antenna Gain	MPE
	power(dBm)	Power(dBm)	power(mW)	Gain(dBi)	(linear)	(mW/cm ²)
11b	19.87	19±1(20)	100.00	2	1.585	0.03155
11g	18.47	19±1(20)	100.00	2	1.585	0.03155
11n/HT20	17.58	17±1(18)	63.10	2	1.585	0.01991
11n/HT40	16.39	17±1(18)	63.10	2	1.585	0.01991

$$Pd = \frac{Pout * G}{4\pi r^2}$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Mode	СН	PK Output	Output	Antenna	Antenna Gain	MPE
	СН	power(dBm)	power(mW)	Gain(dBi)	(linear)	(mW/cm^2)
	CH1	19.87	97.05	2	1.585	0.02872
11b	СН6	19.23	83.75	2	1.585	0.02642
	CH11	19.16	82.41	2	1.585	0.02600
	CH1	18.47	70.31	2	1.585	0.02218
11g	СН6	18.33	68.08	2	1.585	0.02148
	CH11	18.42	69.50	2	1.585	0.02193
	CH1	17.58	57.28	2	1.585	0.01807
11n/HT20	СН6	17.42	55.21	2	1.585	0.01742
	CH11	17.54	56.75	2	1.585	0.01790
11n/HT40	CH1	16.26	42.27	2	1.585	0.01334
	CH4	16.39	43.55	2	1.585	0.01374
	CH7	16.16	41.30	2	1.585	0.01303

$$Pd = \frac{Pout * G}{4\pi r^2}:$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

For antenna 2:

Mode	Max PK Output	Tune Up	Max Tune Up	Antenna	Antenna Gain	MPE
Mode	power(dBm)	Power(dBm)	power(mW)	Gain(dBi)	(linear)	(mW/cm^2)
11b	19.58	19±1(20)	100.00	2	1.585	0.03155
11g	18.91	19±1(20)	100.00	2	1.585	0.03155
11n/HT20	17.34	17±1(18)	63.10	2	1.585	0.01991
11n/HT40	16.87	17±1(18)	63.10	2	1.585	0.01991

$$Pd = \frac{Pout * G}{4\pi r^2}:$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Mode	СН	PK Output	Output	Antenna	Antenna Gain	MPE
	СН	power(dBm)	power(mW)	Gain(dBi)	(linear)	(mW/cm^2)
	CH1	19.31	85.31	2	1.585	0.02691
11b	СН6	19.43	87.70	2	1.585	0.02767
	CH11	19.58	90.78	2	1.585	0.02864
	CH1	18.91	77.80	2	1.585	0.02454
11g	СН6	18.76	75.16	2	1.585	0.02371
	CH11	18.89	77.45	2	1.585	0.02443
	CH1	17.34	54.20	2	1.585	0.01710
11n/HT20	СН6	17.27	53.33	2	1.585	0.01682
	CH11	17.16	52.00	2	1.585	0.01641
11n/HT40	CH1	16.87	48.64	2	1.585	0.01535
	CH4	16.75	47.32	2	1.585	0.01493
	CH7	16.64	46.13	2	1.585	0.01455

$$Pd = \frac{Pout * G}{4\pi r^2}:$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

For MIMO:

Mode	Max PK Output	Tune Up	Max Tune Up	Antenna	Antenna Gain	MPE
Mode	power(dBm)	Power(dBm)	power(mW)	Gain(dBi)	(linear)	(mW/cm ²)
11b		-				1
11g		-				1
11n/HT20	20.47	20±1(21)	125.89	2	1.585	0.03972
11n/HT40	19.58	19±1(20)	100.00	2	1.585	0.03155

$$Pd = \frac{Pout * G}{4\pi r^2}:$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Mode	СН	PK Output	Output	Antenna	Antenna Gain	MPE
	СН	power(dBm)	power(mW)	Gain(dBi)	(linear)	(mW/cm ²)
	CH1					
11b	СН6					
	CH11					
	CH1					
11g	СН6					
	CH11					
11n/HT20	CH1	20.47	111.43	2	1.585	0.03515
	СН6	20.35	108.39	2	1.585	0.03420
	CH11	20.36	108.64	2	1.585	0.03427
11n/HT40	CH1	19.58	90.78	2	1.585	0.02864
	CH4	19.58	90.78	2	1.585	0.02864
	CH7	19.41	87.30	2	1.585	0.02754

$$Pd = \frac{Pout * G}{4\pi r^2}:$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK170612033-E, The MIMO mode power is max, so only calculate max power mode and antenna port 1 gain=2dBi, antenna port 2 gain=2dBi.

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