

FCC ID: 2BUXX-TK20PRO

Maximum Permissible Exposure (MPE)

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 * P * G}}{d}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Average RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 * P * G}{377 * D^2}$$

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

BT:

Measurement Result

Operation Frequency: 2402MHz~2480MHz

Antenna gain: 1.88dBi;

R=20cm

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
		(dBm)		tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric	(mW/cm2)	(mW/cm2)
2402	GFSK	7.95	7±1	8	6.310	1.88	1.54	0.0019	1
2441		8.36	8±1	9	7.943	1.88	1.54	0.0024	1
2480		8.11	8±1	9	7.943	1.88	1.54	0.0024	1
2402	π/4- DQPSK	4.91	4±1	5	3.162	1.88	1.54	0.0010	1
2441		4.48	4±1	5	3.162	1.88	1.54	0.0010	1
2480		3.58	3±1	4	2.512	1.88	1.54	0.0008	1
2402	8-DPSK	5.36	5±1	6	3.981	1.88	1.54	0.0012	1
2441		4.93	4±1	5	3.162	1.88	1.54	0.0010	1
2480		5.71	5±1	6	3.981	1.88	1.54	0.0012	1

BLE:

Measurement Result

Operation Frequency: 2402MHz~2480MHz

Antenna gain: 1.88dBi;

R=20cm

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	BLE 1M	3.01	3±1	4	2.512	1.88	1.54	0.0008	1
2440		2.93	2±1	3	1.995	1.88	1.54	0.0006	1
2480		2.28	2±1	3	1.995	1.88	1.54	0.0006	1

2.4GWIFI:

Measurement Result

Operation Frequency:

2412MHz~2462MHz (20M)

2422MHz~2452MHz (40M)

Antenna gain ANT1: 0.72dBi, ANT2: 0.72dBi, Directional gain: 3.72dBi

R=20cm

SISO

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
		(dBm)		tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2412	11b ant1	16.29	16±1	17	50.119	0.72	1.18	0.0118	1
2437		16.47	16±1	17	50.119	0.72	1.18	0.0118	1
2462		16	16±1	17	50.119	0.72	1.18	0.0118	1
2412	11b ant2	16.39	16±1	17	50.119	0.72	1.18	0.0118	1
2437		16.41	16±1	17	50.119	0.72	1.18	0.0118	1
2462		16.31	16±1	17	50.119	0.72	1.18	0.0118	1
2412	11g ant1	15.08	15±1	16	39.811	0.72	1.18	0.0093	1
2437		15.4	15±1	16	39.811	0.72	1.18	0.0093	1
2462		14.93	14±1	15	31.623	0.72	1.18	0.0074	1
2422	11g ant2	14.53	14±1	15	31.623	0.72	1.18	0.0074	1
2437		14.39	14±1	15	31.623	0.72	1.18	0.0074	1
2452		14.34	14±1	15	31.623	0.72	1.18	0.0074	1
2412	11n20 ant1	13.87	13±1	14	25.119	0.72	1.18	0.0059	1
2437		13.32	13±1	14	25.119	0.72	1.18	0.0059	1
2462		13.83	13±1	14	25.119	0.72	1.18	0.0059	1
2412	11n20 ant2	13.32	13±1	14	25.119	0.72	1.18	0.0059	1
2437		13.26	13±1	14	25.119	0.72	1.18	0.0059	1
2462		13.15	13±1	14	25.119	0.72	1.18	0.0059	1
2422	11n40 ant1	13	13±1	14	25.119	0.72	1.18	0.0059	1
2437		13.29	13±1	14	25.119	0.72	1.18	0.0059	1
2452		12.77	12±1	13	19.953	0.72	1.18	0.0047	1
2422	11n40 ant2	13.38	13±1	14	25.119	0.72	1.18	0.0059	1
2437		13.32	13±1	14	25.119	0.72	1.18	0.0059	1
2452		13.28	13±1	14	25.119	0.72	1.18	0.0059	1
2412	11ax20 ant1	13.97	13±1	14	25.119	0.72	1.18	0.0059	1
2437		13.07	13±1	14	25.119	0.72	1.18	0.0059	1
2462		13.67	13±1	14	25.119	0.72	1.18	0.0059	1
2412	11ax20 ant2	13.26	13±1	14	25.119	0.72	1.18	0.0059	1
2437		13.22	13±1	14	25.119	0.72	1.18	0.0059	1
2462		13.06	13±1	14	25.119	0.72	1.18	0.0059	1
2422	11ax40 ant1	12.97	12±1	13	19.953	0.72	1.18	0.0047	1
2437		13.37	13±1	14	25.119	0.72	1.18	0.0059	1
2452		12.88	12±1	13	19.953	0.72	1.18	0.0047	1
2422	11ax40 ant2	13.34	13±1	14	25.119	0.72	1.18	0.0059	1
2437		13.3	13±1	14	25.119	0.72	1.18	0.0059	1
2452		13.28	13±1	14	25.119	0.72	1.18	0.0059	1

MIMO

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Directional gain		Evaluation result
			(dBm)		tune-up power				(mW/cm2)
					(dBm)	(mW)	(dBi)	Numeric	
802.11ax2 0	Ant1	2412	11.34	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2412	11.96	11±1	12	15.849	0.72	1.18	0.0037
	Sum	2412	14.67	14±1	15	31.623	3.72	2.36	0.0148
	Ant1	2437	11.27	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2437	11.91	11±1	12	15.849	0.72	1.18	0.0037
	Sum	2437	14.61	14±1	15	31.623	3.72	2.36	0.0148
	Ant1	2462	11.12	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2462	11.82	11±1	12	15.849	0.72	1.18	0.0037
	Sum	2462	14.49	14±1	15	31.623	3.72	2.36	0.0148
802.11ax4 0	Ant1	2422	11.41	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2422	12.33	12±1	13	19.953	0.72	1.18	0.0047
	Sum	2422	14.9	14±1	15	31.623	3.72	2.36	0.0148
	Ant1	2437	11.3	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2437	12.29	12±1	13	19.953	0.72	1.18	0.0047
	Sum	2437	14.83	14±1	15	31.623	3.72	2.36	0.0148
	Ant1	2452	11.16	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2452	12.26	12±1	13	19.953	0.72	1.18	0.0047
	Sum	2452	14.76	14±1	15	31.623	3.72	2.36	0.0148
802.11n20	Ant1	2412	11.41	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2412	11.82	11±1	12	15.849	0.72	1.18	0.0037
	Sum	2412	14.63	14±1	15	31.623	3.72	2.36	0.0148
	Ant1	2437	11.37	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2437	11.83	11±1	12	15.849	0.72	1.18	0.0037
	Sum	2437	14.62	14±1	15	31.623	3.72	2.36	0.0148
	Ant1	2462	11.23	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2462	11.83	11±1	12	15.849	0.72	1.18	0.0037
	Sum	2462	14.55	14±1	15	31.623	3.72	2.36	0.0148
802.11n40	Ant1	2422	11.35	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2422	12.28	12±1	13	19.953	0.72	1.18	0.0047
	Sum	2422	14.85	14±1	15	31.623	3.72	2.36	0.0148
	Ant1	2437	11.29	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2437	12.23	12±1	13	19.953	0.72	1.18	0.0047
	Sum	2437	14.8	14±1	15	31.623	3.72	2.36	0.0148
	Ant1	2452	11.25	11±1	12	15.849	0.72	1.18	0.0037
	Ant2	2452	12.23	12±1	13	19.953	0.72	1.18	0.0047
	Sum	2452	14.78	14±1	15	31.623	3.72	2.36	0.0148

5G WIFI:
Antenna gain ANT1: 2.71dBi, ANT2: 2.71dBi, Directional gain: 5.71dBi
R=20cm

WIFI 5.2G-SISO

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density (mW/cm2)
			(dBm)		tune-up power		Gain			
					(dBm)	(mW)	(dBi)	Numeric		
802.11a	Ant 1	5180	12.65	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5200	12.17	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5240	12.04	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5180	12.37	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5200	12.33	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5240	12.24	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11n20	Ant 1	5180	12.09	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5200	12.01	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5240	11.76	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5180	12.44	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5200	12.48	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5240	12.21	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11n40	Ant 1	5190	12.26	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5230	11.83	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5190	12.78	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5230	12.57	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ac20	Ant 1	5180	12.3	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5200	12.08	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5240	11.48	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5180	12.57	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5200	12.52	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5240	12.28	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ac40	Ant 1	5190	12.03	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5230	11.69	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5190	12.73	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5230	12.47	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ac80	Ant 1	5210	11.74	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5210	12.51	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ax20	Ant 1	5180	12.07	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5200	11.99	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5240	11.68	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5180	12.53	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5200	12.48	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5240	12.25	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ax40	Ant 1	5190	12.26	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5230	11.86	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5190	12.78	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5230	12.6	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ax80	Ant 1	5210	11.94	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5210	12.74	12±1	13.00	19.953	2.71	1.87	0.0074	1

WIFI 5.2G-MIMO

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Directional Antenna Gain		Evaluation result	Power density
			(dBm)		tune-up power				(mW/cm2)	(mW/cm2)
					(dBm)	(mW)	(dBi)	Numeric		
802.11ac20	Ant1	5180	10.76	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5180	11.31	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5180	14.05	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5200	10.57	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5200	11.32	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5200	13.97	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5240	10.03	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5240	11.21	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5240	13.67	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11ac40	Ant1	5190	10.89	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5190	11.73	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5190	14.34	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5230	10.29	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5230	11.63	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5230	14.02	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ac80	Ant1	5210	10.29	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5210	11.55	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5210	13.98	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11ax20	Ant1	5180	10.81	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5180	11.22	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5180	14.03	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5200	10.33	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5200	11.3	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5200	13.85	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5240	9.98	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5240	11.13	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5240	13.6	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11ax40	Ant1	5190	10.79	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5190	11.73	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5190	14.3	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5230	10.31	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5230	11.6	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5230	14.01	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ax80	Ant1	5210	10.47	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5210	11.66	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5210	14.12	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11n20	Ant1	5180	10.99	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5180	11.31	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5180	14.16	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5200	10.89	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5200	11.34	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5200	14.13	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5240	10.22	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5240	11.11	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5240	13.7	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11n40	Ant1	5190	11.04	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant2	5190	11.74	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5190	14.41	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5230	10.59	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5230	11.59	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5230	14.13	14±1	15.00	31.623	5.71	3.72	0.0234	1

WIFI 5.3G-SISO

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
			(dBm)		tune-up power		Gain			
					(dBm)	(mW)	(dBi)	Numeric	(mW/cm2)	(mW/cm2)
802.11a	Ant 1	5260	10.56	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 1	5280	10.49	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 1	5320	10.16	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 2	5260	12.2	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5280	12.32	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5320	12.16	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11n20	Ant 1	5260	10.46	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 1	5280	9.42	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 1	5320	8.98	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant 2	5260	12.03	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5280	12.14	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5320	12.09	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11n40	Ant 1	5270	11.52	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5310	11.15	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5270	12.38	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5310	12.36	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ac20	Ant 1	5260	9.9	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 1	5280	9.51	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 1	5320	9.02	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5260	12.05	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5280	12.14	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5320	12.13	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ac40	Ant 1	5270	9.94	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 1	5310	9.61	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5270	12.34	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5310	12.4	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ac80	Ant 1	5290	9.57	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5290	12.29	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ax20	Ant 1	5260	10.06	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 1	5280	9.76	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 1	5320	9.4	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5260	12.09	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5280	12.13	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5320	12.11	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ax40	Ant 1	5270	10.15	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 1	5310	9.75	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5270	12.43	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5310	12.43	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ax80	Ant 1	5290	9.93	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5290	12.46	12±1	13.00	19.953	2.71	1.87	0.0074	1

WIFI 5.3G MIMO

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Directional Antenna Gain		Evaluation result	Power density
			(dBm)		tune-up power	(mW/cm2)			(mW/cm2)	
					(dBm)		(mW)	(dBi)		Numeric
802.11ac20	Ant1	5260	9.59	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5260	10.97	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5260	13.34	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5280	9.93	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5280	11.06	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5280	13.54	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5320	9.85	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5320	11.1	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5320	13.53	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11ac40	Ant1	5270	10.05	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5270	11.39	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5270	13.78	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5310	10.11	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5310	11.48	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5310	13.86	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11ac80	Ant1	5290	9.9	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5290	11.23	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5290	13.63	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11ax20	Ant1	5260	9.91	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5260	10.83	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5260	13.4	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5280	9.97	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5280	10.95	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5280	13.5	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5320	10.01	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5320	11.01	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5320	13.55	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11ax40	Ant1	5270	10.07	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5270	11.38	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5270	13.78	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5310	10.13	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5310	11.51	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5310	13.88	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11ax80	Ant1	5290	10.15	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5290	11.41	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5290	13.84	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11n20	Ant1	5260	9.89	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5260	10.9	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5260	13.43	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5280	10.09	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5280	11.03	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5280	13.6	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5320	10.34	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5320	11.1	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5320	13.75	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11n40	Ant1	5270	10.48	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5270	11.4	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5270	13.97	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5310	10.4	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5310	11.53	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5310	14.01	14±1	15.00	31.623	5.71	3.72	0.0234	1

WIFI 5.6G SISO

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
			(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
					(dBm)	(mW)	(dBi)	Numeric		
802.11a	Ant 1	5500	11.37	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5600	11.84	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5700	12.52	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5500	12.12	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5600	10.49	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 2	5700	11.29	11±1	12.00	15.849	2.71	1.87	0.0059	1
802.11n20	Ant 1	5500	11.07	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5600	11.78	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5700	12.36	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5500	9.18	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5600	9.32	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5700	10.83	10±1	11.00	12.589	2.71	1.87	0.0047	1
802.11n40	Ant 1	5510	11.42	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5590	12.08	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5670	12.51	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5510	9.42	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5590	9.47	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5670	10.59	10±1	11.00	12.589	2.71	1.87	0.0047	1
802.11ac20	Ant 1	5500	11.05	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5600	11.98	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5700	12.4	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5500	8.98	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant 2	5600	9.2	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5700	10.65	10±1	11.00	12.589	2.71	1.87	0.0047	1
802.11ac40	Ant 1	5510	11.41	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5590	12.3	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5670	12.37	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5510	9.26	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5590	9.49	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5670	10.54	10±1	11.00	12.589	2.71	1.87	0.0047	1
802.11ac80	Ant 1	5530	11.24	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5610	11.91	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5530	9.04	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5610	9.36	9±1	10.00	10.000	2.71	1.87	0.0037	1
802.11ax20	Ant 1	5500	10.8	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 1	5600	11.72	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5700	12.35	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5500	8.91	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant 2	5600	9.14	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5700	10.48	10±1	11.00	12.589	2.71	1.87	0.0047	1
802.11ax40	Ant 1	5510	11.68	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5590	12.33	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 1	5670	12.53	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5510	9.26	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5590	9.75	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5670	10.92	10±1	11.00	12.589	2.71	1.87	0.0047	1
802.11ax80	Ant 1	5530	11.66	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 1	5610	12.11	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5530	9.45	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant 2	5610	9.79	9±1	10.00	10.000	2.71	1.87	0.0037	1

WIFI 5.6G MIMO

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Directional Antenna Gain		Evaluation result	Power density
			(dBm)		tune-up power				(mW/cm2)	(mW/cm2)
					(dBm)	(mW)	(dBi)	Numeric		
802.11ac20	Ant1	5500	7.76	7±1	8.00	6.310	2.71	1.87	0.0023	1
	Ant2	5500	8.26	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5500	11.03	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5600	8.48	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5600	8.46	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5600	11.48	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5700	9.3	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5700	9.63	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Sum	5700	12.48	12±1	13.00	19.953	5.71	3.72	0.0148	1
802.11ac40	Ant1	5510	8.13	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5510	8.66	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5510	11.41	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5590	8.7	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5590	8.86	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5590	11.79	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5670	9.33	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5670	9.85	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Sum	5670	12.61	12±1	13.00	19.953	5.71	3.72	0.0148	1
802.11ac80	Ant1	5530	8.06	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5530	8.49	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5530	11.29	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5610	8.7	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5610	8.61	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5610	11.67	11±1	12.00	15.849	5.71	3.72	0.0117	1
802.11ax20	Ant1	5500	7.75	7±1	8.00	6.310	2.71	1.87	0.0023	1
	Ant2	5500	8.24	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5500	11.01	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5600	8.19	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5600	9.48	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Sum	5600	11.89	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5700	9.2	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5700	10.31	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5700	12.8	12±1	13.00	19.953	5.71	3.72	0.0148	1
802.11ax40	Ant1	5510	8.14	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5510	9.48	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Sum	5510	11.87	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5590	8.66	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5590	9.64	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Sum	5590	12.19	12±1	13.00	19.953	5.71	3.72	0.0148	1
	Ant1	5670	9.16	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5670	10.26	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5670	12.76	12±1	13.00	19.953	5.71	3.72	0.0148	1
802.11ax80	Ant1	5530	8.63	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Ant2	5530	8.63	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5530	11.64	11±1	12.00	15.849	5.71	3.72	0.0117	1
	Ant1	5610	9.23	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5610	8.57	8±1	9.00	7.943	2.71	1.87	0.0029	1
	Sum	5610	11.92	11±1	12.00	15.849	5.71	3.72	0.0117	1

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Directional Antenna Gain		Evaluation result	Power density
			(dBm)		tune-up power				(mW/cm2)	(mW/cm2)
					(dBm)	(mW)	(dBi)	Numeric		
802.11n20	Ant1	5500	10.96	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5500	10.46	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5500	13.73	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5600	10.78	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5600	10.93	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5600	13.87	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5700	11.5	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant2	5700	12.18	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Sum	5700	14.86	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11n40	Ant1	5510	10.41	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5510	10.9	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5510	13.67	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5590	11.29	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant2	5590	11.35	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5590	14.33	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5670	11.61	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant2	5670	12.11	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Sum	5670	14.88	14±1	15.00	31.623	5.71	3.72	0.0234	1

WIFI 5.8G SISO

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
			(dBm)		tune-up power		Gain			
					(dBm)	(mW)	(dBi)	Numeric	(mW/cm2)	(mW/cm2)
802.11a	Ant 1	5745	13.58	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5785	13.88	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5825	14.32	14±1	15.00	31.623	2.71	1.87	0.0117	1
	Ant 2	5745	11.7	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5785	12.2	12±1	13.00	19.953	2.71	1.87	0.0074	1
	Ant 2	5825	12.6	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11n20	Ant 1	5745	13.53	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5785	13.72	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5825	14.4	14±1	15.00	31.623	2.71	1.87	0.0117	1
	Ant 2	5745	11.57	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5785	11.94	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5825	12.44	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11n40	Ant 1	5755	13.67	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5795	13.97	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 2	5755	11.61	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5795	12.01	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ac20	Ant 1	5745	13.48	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5785	13.84	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5825	14.32	14±1	15.00	31.623	2.71	1.87	0.0117	1
	Ant 2	5745	11.28	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5785	11.74	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5825	12.21	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ac40	Ant 1	5755	13.75	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5795	14.22	14±1	15.00	31.623	2.71	1.87	0.0117	1
	Ant 2	5755	11.47	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5795	11.93	11±1	12.00	15.849	2.71	1.87	0.0059	1
802.11ac80	Ant 1	5775	13.63	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 2	5775	11.4	11±1	12.00	15.849	2.71	1.87	0.0059	1
802.11ax20	Ant 1	5745	13.33	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5785	13.73	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5825	14.33	14±1	15.00	31.623	2.71	1.87	0.0117	1
	Ant 2	5745	10.94	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant 2	5785	11.41	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5825	12.03	12±1	13.00	19.953	2.71	1.87	0.0074	1
802.11ax40	Ant 1	5755	13.74	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 1	5795	14.11	14±1	15.00	31.623	2.71	1.87	0.0117	1
	Ant 2	5755	11.41	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant 2	5795	11.92	11±1	12.00	15.849	2.71	1.87	0.0059	1
802.11ax80	Ant 1	5775	13.85	13±1	14.00	25.119	2.71	1.87	0.0093	1
	Ant 2	5775	11.55	11±1	12.00	15.849	2.71	1.87	0.0059	1

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Directional Antenna Gain		Evaluation result	Power density
			(dBm)		tune-up power				(mW/cm2)	(mW/cm2)
					(dBm)	(mW)	(dBi)	Numeric		
802.11ac20	Ant1	5745	10.14	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5745	11.04	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5745	13.62	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5785	10.49	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5785	11.17	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5785	13.85	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5825	11.03	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant2	5825	11.46	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5825	14.26	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ac40	Ant1	5755	10.43	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5755	11.64	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5755	14.09	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5795	10.79	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5795	11.83	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5795	14.35	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ac80	Ant1	5775	10.5	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5775	11.45	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5775	14.01	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ax20	Ant1	5745	9.78	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5745	11.19	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5745	13.55	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5785	10.42	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5785	11.24	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5785	13.86	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5825	11.08	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant2	5825	11.52	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5825	14.32	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ax40	Ant1	5755	10.36	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5755	11.61	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5755	14.04	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5795	10.85	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5795	11.85	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5795	14.39	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ax80	Ant1	5775	10.62	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5775	11.6	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5775	14.15	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11n20	Ant1	5745	9.8	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5745	9.38	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Sum	5745	12.61	12±1	13.00	19.953	5.71	3.72	0.0148	1
	Ant1	5785	10.3	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2</									

modulation	Antenna	Channel Freq. (MHz)	conducted power	Tune-up power (dBm)	Max		Directional Antenna Gain		Evaluation result	Power density
			(dBm)		tune-up power				(mW/cm2)	(mW/cm2)
					(dBm)	(mW)	(dBi)	Numeric		
802.11ac20	Ant1	5745	10.14	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5745	11.04	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5745	13.62	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5785	10.49	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5785	11.17	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5785	13.85	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5825	11.03	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant2	5825	11.46	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5825	14.26	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ac40	Ant1	5755	10.43	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5755	11.64	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5755	14.09	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5795	10.79	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5795	11.83	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5795	14.35	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ac80	Ant1	5775	10.5	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5775	11.45	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5775	14.01	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ax20	Ant1	5745	9.78	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5745	11.19	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5745	13.55	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5785	10.42	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5785	11.24	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5785	13.86	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5825	11.08	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Ant2	5825	11.52	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5825	14.32	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ax40	Ant1	5755	10.36	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5755	11.61	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5755	14.04	14±1	15.00	31.623	5.71	3.72	0.0234	1
	Ant1	5795	10.85	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5795	11.85	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5795	14.39	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11ax80	Ant1	5775	10.62	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5775	11.6	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5775	14.15	14±1	15.00	31.623	5.71	3.72	0.0234	1
802.11n20	Ant1	5745	9.8	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Ant2	5745	9.38	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Sum	5745	12.61	12±1	13.00	19.953	5.71	3.72	0.0148	1
	Ant1	5785	10.3	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5785	9.8	9±1	10.00	10.000	2.71	1.87	0.0037	1
	Sum	5785	13.07	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5825	10.86	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5825	10.39	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Sum	5825	13.64	13±1	14.00	25.119	5.71	3.72	0.0186	1
802.11n40	Ant1	5755	10.12	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5755	11.48	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5755	13.86	13±1	14.00	25.119	5.71	3.72	0.0186	1
	Ant1	5795	10.63	10±1	11.00	12.589	2.71	1.87	0.0047	1
	Ant2	5795	11.65	11±1	12.00	15.849	2.71	1.87	0.0059	1
	Sum	5795	14.18	14±1	15.00	31.623	5.71	3.72	0.0234	1

SIMULTANEOUS TRANSMISSIONS

When a number of sources at different frequencies, and/or broadband sources, contribute to the total exposure, it becomes necessary to weigh each contribution relative to the MPE. To comply with the MPE, the fraction of the MPE in terms of E^2 , H^2 (or power density) incurred within each frequency interval should be determined and the sum of all such fractions should not exceed unity. In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

Note: The WIFI 2.4G & WIFI 5G cannot transmit at same time.

Worse case BT+WIFI 5G: $0.0024+0.0234=0.0258$

Conclusion:

For the max result: $0.0258 \leq 1.0$, compliance RF exposure.

Signature:



Date: 2026-03-10

NAME AND TITLE (Please print or type): alex li/Manager

COMPANY (Please print or type): Shenzhen NTEK Testing Technology Co., Ltd./ No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of China