

FCC ID: 2ANDX-CP30B

Portable device

According to §15.247(e)(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB447498 D01 General RF Exposure Guidance V06

a) The 1-g SAR and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where:

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

b) For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):

1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) (f\text{MHz}/150)]\}$ mW, for 100 MHz to 1500 MHz

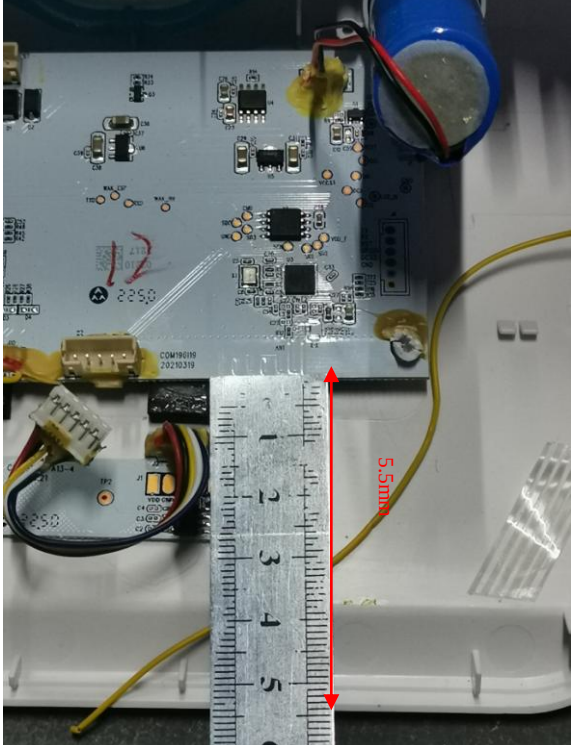
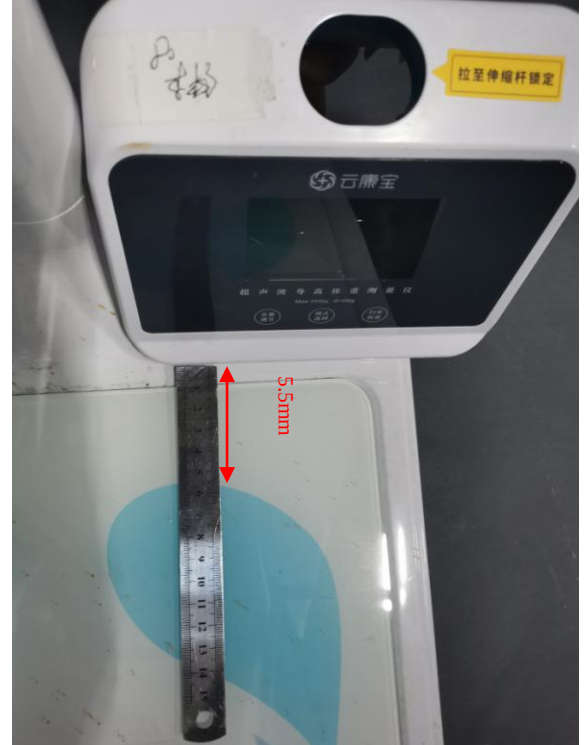
2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW, for > 1500 MHz and ≤ 6 GHz

SAR Test Exclusion Thresholds for 100MHz-6 GHz and > 50 mm

Approximate SAR test exclusion power thresholds at selected frequencies and test separation distances are illustrated in the following table. The equation and threshold in 4.3.1 must be applied to determine SAR test exclusion.

MHz	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
100	474	481	487	494	501	507	514	521	527	534	541	547	554	561	567	mW
150	387	397	407	417	427	437	447	457	467	477	487	497	507	517	527	
300	274	294	314	334	354	374	394	414	434	454	474	494	514	534	554	
450	224	254	284	314	344	374	404	434	464	494	524	554	584	614	644	
835	164	220	275	331	387	442	498	554	609	665	721	776	832	888	943	
900	158	218	278	338	398	458	518	578	638	698	758	818	878	938	998	
1500	122	222	322	422	522	622	722	822	922	1022	1122	1222	1322	1422	1522	
1900	109	209	309	409	509	609	709	809	909	1009	1109	1209	1309	1409	1509	
2450	96	196	296	396	496	596	696	796	896	996	1096	1196	1296	1396	1496	
3600	79	179	279	379	479	579	679	779	879	979	1079	1179	1279	1379	1479	
5200	66	166	266	366	466	566	666	766	866	966	1066	1166	1266	1366	1466	
5400	65	165	265	365	465	565	665	765	865	965	1065	1165	1265	1365	1465	
5800	62	162	262	362	462	562	662	762	862	962	1062	1162	1262	1362	1462	

Measurement Result

The distance from the antenna to the edge of the housing	Actual distance from the edge of the shell to the human body
	

Total distance=5.5cm+5.5cm=11cm=110mm

$[(\text{test separation distance}-50\text{mm}) \cdot 10]\text{mW}=(110-50)\text{mm} \cdot 10=600\text{mW}$

BLE

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted power (mW)	[(test separation distance-50mm)•10]} mW	Total power (mW)	Limit (mW)
GFSK	2.402	7.7	5.888	600	605.888	696
	2.44	5.88	3.873	600	603.873	696
	2.48	6.5	4.467	600	604.467	696

EDR

Modulation	Channel Freq. (GHz)	Conducte d power (dBm)	Conducte d power (mW)	[(test separation distance-50mm)•10]} mW	Total power (mW)	Limit (mW)
GFSK	2.402	5.78	3.784	600	603.784	696
	2.441	5.78	3.784	600	603.784	696
	2.48	5.68	3.698	600	603.698	696
π/4-DQPSK	2.402	7.66	5.834	600	605.834	696
	2.441	7.65	5.821	600	605.821	696
	2.48	7.55	5.689	600	605.689	696
8-DPSK	2.402	8.08	6.427	600	606.427	696
	2.441	8.06	6.397	600	606.397	696
	2.48	7.84	6.081	600	606.081	696

WIFI

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted power (mW)	[(test separation distance-50mm)•10]} mW	Total power (mW)	Limit (mW)
802.11b	2.412	12.65	18.408	600	618.408	696
	2.437	12.14	16.368	600	616.368	696
	2.462	12.49	17.742	600	617.742	696
802.11g	2.412	9.06	8.054	600	608.054	696
	2.437	9.35	8.610	600	608.610	696
	2.462	9.40	8.710	600	608.710	696
802.11n HT20	2.412	8.20	6.607	600	606.607	696
	2.437	8.39	6.902	600	606.902	696
	2.462	8.69	7.396	600	607.396	696
802.11n HT40	2.422	8.38	6.887	600	606.887	696
	2.437	8.81	7.603	600	607.603	696
	2.452	9.64	9.204	600	609.204	696

Note: This product does not support the requirements under 2.4G transmission simultaneous

Conclusion:

For the max result : $618.408 \leq 696\text{mW}$ No SAR is required.



Signature:

Date: 2023-09-22

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