RF EXPOSURE EVALUATION METHOD

FCC ID: 2A9PJ-S8PRO

Applicable standard：
In accordance with FCC 47 CFR part 2 (2.1093) this device has been defined as a portable device which is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

Portable devices must be evaluated using the specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEEC95.1-1992. and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2003.

Per FCC KDB 447498 D01 v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances s 50 mm are determined by:

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

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	SAR Test Exclusion Threshold (mW)
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

  The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [$\sqrt{f(GHz)}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
f(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
The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

BT

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	1.05	21	Pass
NVNT	1-DH1	2441	1.87	21	Pass
NVNT	1-DH1	2480	1.55	21	Pass
NVNT	2-DH1	2402	1.72	21	Pass
NVNT	2-DH1	2441	2.06	21	Pass
NVNT	2-DH1	2480	1.89	21	Pass
NVNT	3-DH1	2402	1.83	21	Pass
NVNT	3-DH1	2441	2.24	21	Pass
NVNT	3-DH1	2480	1.92	21	Pass

max possible output power (PK,conducted)：2±1dBm

-1dBi logarithmic terms convert to numeric result is nearly 0.79

3dBm=2mW

2402MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation

distance,mm)] · [√f(GHz)]= 2/5*√2.402=0.62≤3.0

2441MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation

distance,mm)] · [√f(GHz)]= 2/5*√2.441=0.625≤3.0

2480MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation

distance,mm)] · [√f(GHz)]= 2/5*√2.48=0.63≤3.0

BLE

Mode	Frequency(MHz)	Maximum Conducted Output Power(PK) (dBm)	Conducted Output Power Limit(dBm)
GFSK(1Mbps)	2402	0.53	30
	2440	0.91	30
	2480	0.57	30
GFSK(2Mbps)	2402	0.71	30
	2440	1.17	30
	2480	0.84	30

max possible output power (PK,conducted)：1±1dBm

-1dBi logarithmic terms convert to numeric result isnearly 0.79

2dBm=1.58mW

2402MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation

distance,mm)] · [√f(GHz)]= 1.58/5*√2.402=0.49≤3.0

2440MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation

distance,mm)] · [√f(GHz)]= 1.58/5*√2.440=0.494≤3.0

2480MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation

distance,mm)] · [√f(GHz)]= 1.58/5*√2.48=0.498≤3.0

Conclusion:

1. [(max. power of channel, including tune-up tolerance, mW)/(min. test separation

distance, mm)] * [√f(GHz)] < 3.0.

2. SAR Test Exclusion Thresholds is 3.0 for separation distance 5mm. Therefore,

SAR test is not required.