



RF Exposure Evaluation

FCC ID: 2A6S4-T221

1. Client Information

Applicant	:	SHENZHEN NANMA TECHNOLOGY CO.,LTD.
Address	:	4/F, Building C, No.4,Road 1,Shangxue Science Technology Park Longgang District, Shenzhen China
Manufacturer	:	SHENZHEN NANMA TECHNOLOGY CO.,LTD.
Address	:	4/F, Building C, No.4,Road 1,Shangxue Science Technology Park Longgang District, Shenzhen China

2. General Description of EUT

EUT Name	:	T221
Model(s) No.	:	T221
Model Difference	:	----
Product Description	:	Operation Frequency: Bluetooth 5.0: 2402MHz~2480MHz 2.4G WIFI: 2412MHz~2462MHz
	:	Antenna Gain: 1.9dBi FPC Antenna
Power Supply	:	USB Input: DC 5V/2A DC 3.85V 5000mAh 19.25Wh Rechargeable Li-ion battery
Software Version	:	3562-R960-10.1in-13.0-4+64to8+11+128G-normal-02M1+5648-T2 21-wzh-20231211
Hardware Version	:	R960-RK3562-V1.0-M

Remark: The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.

Note: More test information about the EUT please refer the RF Test Report.

SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

(1) Clause 4.3: General SAR test reduction and exclusion guidance

Sub clause 4.31: Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance ≤ 5 mm are determined by:

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f(\text{GHz})}]}{\leq 3.0 \text{ for 1-g SAR}}$$

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f(\text{GHz})}]}{\leq 7.5.0 \text{ for 10-g SAR}}$$



2. Calculation:

Test separation: 5mm						
Bluetooth Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	6.704	6±1	7	5.012	1.554	3.0
2.441	6.774	6±1	7	5.012	1.566	3.0
2.480	6.562	6±1	7	5.012	1.579	3.0
Bluetooth Mode (Pi/4-DQPSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	7.531	7±1	8	6.310	1.956	3.0
2.441	7.491	7±1	8	6.310	1.972	3.0
2.480	7.177	7±1	8	6.310	1.987	3.0
Bluetooth Mode (8-DPSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	7.955	7±1	8	6.310	1.956	3.0
2.441	7.343	7±1	8	6.310	1.972	3.0
2.480	7.745	7±1	8	6.310	1.987	3.0

Test separation: 5mm						
Bluetooth LE Mode (1M)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	6.375	6±1	7	5.012	1.554	3.0
2.440	6.229	6±1	7	5.012	1.566	3.0
2.480	5.908	5±1	6	3.981	1.254	3.0
Bluetooth LE Mode (2M)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	6.316	6±1	7	5.012	1.554	3.0
2.440	6.121	6±1	7	5.012	1.566	3.0
2.480	5.831	5±1	6	3.981	1.254	3.0



Test separation: 5mm						
802.11b						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	7.21	7±1	8	6.310	1.960	3.0
2.437	7.83	7±1	8	6.310	1.970	3.0
2.462	7.42	7±1	8	6.310	1.980	3.0
802.11g						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	7.22	7±1	8	6.310	1.960	3.0
2.437	7.54	7±1	8	6.310	1.970	3.0
2.462	7.59	7±1	8	6.310	1.980	3.0
802.11n(HT20)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	7.34	7±1	8	6.310	1.960	3.0
2.437	7.10	7±1	8	6.310	1.970	3.0
2.462	7.71	7±1	8	6.310	1.980	3.0
802.11n(HT40)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.422	7.13	7±1	8	6.310	1.964	3.0
2.437	7.44	7±1	8	6.310	1.970	3.0
2.452	7.22	7±1	8	6.310	1.976	3.0
802.11ax(HE20)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	7.26	7±1	8	6.310	1.960	3.0
2.437	7.21	7±1	8	6.310	1.970	3.0
2.462	7.50	7±1	8	6.310	1.980	3.0
802.11ax(HE40)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.422	7.09	7±1	8	6.310	1.964	3.0
2.437	7.47	7±1	8	6.310	1.970	3.0
2.452	7.23	7±1	8	6.310	1.976	3.0

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

-----END OF THE REPORT-----

