

1. RF Exposure Requirements

1.1 General Information

Client Information

Applicant:	Shenzhen AngSi Technology Co., LTD
Address of applicant:	6/F, Block B, Ding Xin Science Park, Hong Lang North No.2 Road, Bao An District, ShenZhen PRC
Manufacturer:	Shenzhen AngSi Technology Co., LTD
Address of manufacturer:	6/F, Block B, Ding Xin Science Park, Hong Lang North No.2 Road, Bao An District, ShenZhen PRC

General Description of EUT:

Product Name:	A70W
Trade Name	Pioneer
Model No.:	A70W
Adding Model(s):	A70W-WL, A70W-BN, A70W-EB
Rated Voltage:	Input : 5V/600 mA Battery: DC 3.7V
Battery Capacity:	1000mAh
Adapter Model:	/
FCC ID:	2AGA6-PIA70W
Equipment Type:	Portable device

Technical Characteristics of EUT:

Bluetooth (LE mode)

Bluetooth Version:	V5.4 (LE mode)
Frequency Range:	2402-2480MHz
RF Output Power:	1Mbps: 4.39dBm (Conducted) 2Mbps: 4.71dBm (Conducted)
Data Rate:	1Mbps, 2Mbps
Modulation:	GFSK
Quantity of Channels:	40
Channel Separation:	2MHz
Type of Antenna:	PCB Antenna
Antenna Gain:	-1.31dBi

Bluetooth (BR/EDR mode)

Bluetooth Version:	V5.4 (BR/EDR mode)
Frequency Range:	2402-2480MHz
RF Output Power:	4.48dBm (Conducted)
Data Rate:	1Mbps, 2Mbps, 3Mbps
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Quantity of Channels:	79

Channel Separation:	1MHz
Type of Antenna:	PCB Antenna
Antenna Gain:	-1.31dBi

1.2 RF Exposure Exemption

According to the KDB 447498 D01 v06 section 4.3.1, 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
 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

1.3 Calculated Result

Bluetooth

Tx frequency range: 2402-2480MHz

Min. test separation distance: 5mm

Maximum Conducted Output Power: 4.71dBm

Tune-Up output power: 5.0dBm

RF channel transmit frequency: 2480MHz

Result: 0.98

Limit: 3.0

The exclusion thresholds is $0.98 < 3$, so the transmitter complies with the RF exposure requirements and the SAR is not required.