FCC ID : 2BDYR-ZS300

➢ Test Standards and Limits

1. According to KDB 447498 D01 v06, Section 4.3.1

2. FCC Radiofrequency radiation exposure limits:

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)/(min test separation distance)]*[√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
• The result is rounded to one decimal place for comparison
• 3.0 and 7.5 are referred to as the numeric thresholds
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 according to 4.1 f) is applied to determine SAR test exclusion.
For 2.4G band device, the limit of worse case is
P_{max}≤3.0*D_{min})/ f =3.0*5/ 2.480 =9.525mW

➢ Measurement and Calculation

1. Maximum transmit power

Antenna Gain:	-2.72 dBi

TestMode	Antenna	Frequency[MHz]	Conducted Peak Powert[dBm]
BLE_1M	Ant1	2402	0.28
		2440	0.85
		2480	0.57
BLE_2M	Ant1	2402	0.45
		2440	1.03
		2480	0.90

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Powert[dBm]
DH5	Ant1	2402	-0.78
		2441	0.33
		2480	0.88
2DH5	Ant1	2402	0.10
		2441	1.19
		2480	1.74
3DH5	Ant1	2402	0.55
		2441	1.63
		2480	2.13

2. MPE Calculation

The Max Conducted Peak Output Power is 2.13 dBm.
The Max Antenna Gain is -2.72dBi.

According to the formula. calculate the EIRP test result:
EIRP= P x G = 1.63 mW x 0.53 = 0.86mW < 9.525mW

So the SAR report is not required.

-End of the Report-