FCC ID : XGB-RACERW

➢ 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

$P_{max} ≤ 3.0*D_{min})/ f = 3.0*5/ 2.480 = 9.525$ mW

➢ Measurement and Calculation

1. Maximum transmit power

Antenna Gain:	1.8 dBi

TestMode	Antenna	Frequency[MHz]	Conducted Peak Powert[dBm]
BLE_1M	Ant1	2402	-1.46
		2440	-1.65
		2480	-1.36
BLE_2M	Ant1	2402	-1.66
		2440	-1.84
		2480	-1.53

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Powert[dBm]
SRD	Ant1	2402	-1.52
		2441	-1.65
		2480	-1.40

2. MPE Calculation

The Max Conducted Peak Output Power is -1.36 dBm.
The Max Antenna Gain is 1.8 dBi.

According to the formula. calculate the EIRP test result:
EIRP= P x G = 0.73 mW x 1.51 = 1.10mW < 9.525mW

So the SAR report is not required.

-End of the Report-