RF EXPOSURE EVALUATION

EUT Specification

EUT	BOOMBOT PRO & BASS STATION
Model Number	BSTN-01
FCC ID	2AEZY-BSTN-01
Antenna gain (Max)	0dBi
Kind of Device	Bluetooth 3.0+EDR
Operation Frequency	2402-2480MHz
Modulation	GFSK, π/4-DQPSK, 8DPSK
Input Rating	DC 12V, 1500mA from adapter or DC 3.7V, 1000mA lithium battery
Max. output power	-0.99dBm(0.000796W)
Classification Per Stipulated Test Standard	§15.247(i), §2.1093

Test Requirement:

According to §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

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,[24] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[25]
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

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 5) in section 4.1 is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by §2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to quality for TCB approval.

One antenna is available for the EUT(BT product). The minimum separation distance is 5mm.

Channel Frequency (MHz)	Measurement Peak Output Power(dBm)		
	GFSK	π/4-DQPSK	8DPSK
2402	-2.02	-1.52	-1.31
2441	-0.99	-2.32	-2.17
2480	-1.64	-2.98	-2.67

Modulation	Channel Frequency (MHz)	Tune up tolerance(dBm)	Max tune up conducted power(dBm)	Output Peak power (mW)	Calculation Result	Limits
GFSK	2402	-2±1	-1	0.79	0.2462	3
	2441	-1±1	0	1.00	0.3125	3
	2480	-2±1	-1	0.79	0.2502	3
π/4-DQPSK	2402	-2±1	-1	0.79	0.2462	3
	2441	-2±1	-1	0.79	0.2482	3
	2480	-3±1	-2	0.63	0.1987	3
8DPSK	2402	-1±1	0	1.00	0.3100	3
	2441	-2±1	-1	0.79	0.2482	3
	2480	-3±1	-2	0.63	0.1987	3

According to KDB 447498, no stand-alone required for BT antenna, and no simultaneous SAR measurement is required.

Signature

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