



# RF EXPOSURE EVALUATION

<b>Product Name</b>	:	Massage chair
<b>Model Name</b>	:	BFJ-7010
<b>FCC ID</b>	:	2AVH9-BFJ-7010
<b>Specification for wifi</b>	:	802.11b/g/n HT20/40
<b>Bluetooth Version</b>	:	BT 4.2Br+Edr
<b>Operation Frequency</b>	:	Wifi: 2412-2462MHz for 802.11b/g; n(HT40) Wifi: 2422-2452MHz for 802.11n(HT40); BT: 2402-2480MHz
<b>Number of Channel</b>	:	Wifi: 11 channels for 802.11b/g; n(HT40) Wifi: 9channels for 802.11n(HT40); BT: 79 channels For DSS BT: 40 channels For DTS
<b>Antenna Type</b>	:	PCB Antenna
<b>Antenna Gain</b>	:	Wifi: 3 dBi BT: 0 dBi
<b>Power supply</b>	:	AC 120V/60Hz
<b>Device category</b>	:	Portable (<20cm separation)

## Standard Requirement

According to § 15.247(i) and § 1.1307b(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 levels in excess of the Commission's guidelines. See KDB 447498 D01 General RF Exposure Guidance v05, section 4. 3. 1.

The 1-g and 10-g SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances  $\leq 50\text{mm}$  are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g SAR extremity SAR, where}$$

- $f(\text{GHz})$  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.

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50\text{mm}$  and for transmission frequencies between 100MHz and 6GHz. When the minimum test separation distance is  $< 5\text{mm}$ , a distance of 5mm 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 qualify for TCB approval.

One antenna is available for the EUT (wifi and BT product). The minimum separation distance is 48mm.

Note: For BT and Wifi Worstcase mode is Wifi

Worstcase mode	Channel Frequency (MHz)	Peak Power Output(dBm)
802.11b	2462	12.98
802.11g	2412	18.69
802.11n20	2437	18.85
802.11n40	2422	16.44
BT for DTS	2402	-2.52
BT for DSS With $\pi/4$ QPSK	2402	-3.28

Channel Frequency (MHz)	Tune up tolerance (dBm)	Max tune up conducted power(dBm)	Output Peak power (mW)	Calculation Result	Limits
2462	12 $\pm$ 1	13	19.95	0.652	3
2412	18 $\pm$ 1	19	79.43	2.570	3
2437	18 $\pm$ 1	19	79.43	2.583	3
2422	16 $\pm$ 1	17	50.12	1.625	3
2402	-2 $\pm$ 1	-1	0.794	0.0256	3
2402	-3 $\pm$ 1	-2	0.631	0.0204	3

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

Signature

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