Equivalent Isotropic Radiated Power (EIRP)

EIRP = max. conducted output power + antenna gain

EIRP = 12.74 dBm + (0 dBi [antenna gain claimed by manufacturer)+

(0.26 dBm [Tune up])= 13 dBm= 19.95 mW

Exemption Limits for Routine Evaluation according to FCC KDB Publication, RSS-102

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:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√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 before calculation
- The result is rounded to one decimal place for comparison

Exemption Limits for Routine Evaluation – SAR Evaluation

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table.

Table: SAR evaluation — Exemption limits for routine evaluation based on frequency and separation distance

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
607.9	19.54 mW	40.08 mW	59.62 mW	79.57 mW	99.70 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of 50 mm
607.9	119.24 mW	139.77 mW	159.31 mW	179.26 mW	199.39mW

Output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power.

Photo below shows the separation distance between the antenna and outside enclosure.


17mm
30
20
10


20mm
20


62mm


20mm

Established separation distance is 5 mm.
Operating frequency band: 470.1-607.9 MHz
Max. output power level at 5 mm separation distance at 607.9 MHz according to table is: 19.54 mW

The product doesn't need head SAR.
Because it is wireless conference microphone base.
Power on and press down TALK button to talk.
To mute talking, press down the MUTE button.

10-g Extremity SAR Test Exclusion Power Thresholds are 2.5 times higher than the 1-g SAR Test Exclusion Thresholds indicated above. These thresholds do not apply, by extrapolation or other means, to occupational exposure limits.

The product is exempt from SAR Evaluation/Testing because the output power of 19.95 mW is below the exemption limit of 48.85 mW (19.54 mW*2.5 for 10-g extremity SAR of KDB 447498 D01 v06 section 4.3.1).

Therefore the product exempts SAR test.