

RF exposure test exclusion evaluation report

Product:	TWS Earphones
Model no.:	CGB-V1-STCHA, CGB-V1-STCHB, CGB-V1-JAKSA, CGB-V1-DEDPA
FCC ID:	2BLK2-CGBEXG1
Earphones Rating:	DC IN:5V=30mA(max) Battery:3.7V=30mA
RF Transmission Frequency:	2402MHz-2480MHz
Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Antenna Type:	Bipolar Antenna
Max Antenna Gain:	2.67dBi
Description of the EUT:	The Equipment Under Test (EUT) is a TWS Earphones which support Bluetooth function (BR+EDR).
Reference Report	68.950.24.1187.01

1. Limit and Guidelines on Exposure to Electromagnetic Fields

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

According to KDB 447498 D01 General RF Exposure Guidance v06, Mobile Portable RF Exposure, no SAR required if power is lower than the flowing threshold:

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:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})]$

$[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g 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 calculation²⁵
- 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.

2. Calculation method

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$

Max Tune-up power = 4dBm=2.52mW

Distance = 5 mm

$f = 2.402$ GHz

$[2.52/5] \cdot \text{SQRT}(2.402) = 0.39$

$0.78 \leq 3.0$

Therefore, excluded from SAR testing.

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Reviewed by:

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