

Statement of Justification and Compliance for SAR Test Exclusion

Product: Digital Wireless Microphone
FCC ID: G4RCAROLDW25T
Manufacturer: TAIWAN CAROL ELECTRONICS CO., LTD.
Brand: CAROL
Model: DW-25T

According to FCC KDB 447498 D01 General RF Exposure Guidance v05

4.3.1. Standalone SAR test exclusion considerations

1) 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:

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

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion.

For the present device, the declared output power is 8 dBm with +/- 2 dB tolerance.

So,

max. power of channel, including tune-up tolerance = 10.000 mW (10.0dBm)

min. test separation distance = 5 mm

$f_{(\text{GHz})} = 2.478$

$$\begin{aligned} & [(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \\ &= (10.000 / 5) \cdot (\sqrt{2.478}) \\ &= 3.1 \leq 7.5 \end{aligned}$$

Hence the SAR Exclusion Threshold condition is satisfied and the SAR evaluation for general population exposure conditions is not required.