

# Analysis Report

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The Equipment Under Test (EUT) is an audio wireless FM microphone for its associated receiver. The main function of the EUT is used to modulate the audio signal that can be transmitting to its associated receiver. And it can transmit signal in three different channels, 169.505MHz, 170.245MHz and 171.905MHz. But it can transmit only one channel for each microphone and need to change the crystal for the other two frequencies; the change of crystal can only be done by manufacturer.

This EUT is powered by two new 1.5V "AA" size batteries. A TALK-MUTE/OFF switch on top of the body, the red LED will be on when push to TALK position. It can momentarily turn off the audio signal, set the switch to MUTE position.

The EUT is a portable equipment in normal operating configuration.

Antenna Type: Internal, integral  
Antenna Gain: 0dBi  
Nominal conducted output power: 10 mW  
Allowed production tolerance: +5 / -20 dB

The Maximum conducted output is:  $10 * 10^{(5/10)} = 32\text{mW}$

According to Section 4.3.1 in the KDB 447498:

At 171.905 MHz,  
Threshold =  $3.0 * (\text{min. test separation distance, mm}) / \text{SQRT}(f \text{ in GHz})$   
=  $3.0 * (5 / \text{SQRT}(0.171905)) = 36\text{mW}$

Since the above Maximum conducted output power is below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.