

Analysis Report

FCC ID: 2AIGJ1201774

The EUT is a FM Transmitter (using in a vehicle) which transmits audio signal from Apple devices (iPhone/iPad) to the car radio. The Unit comes with a LCD display to show the frequency & channel being transmitted to the car radio. The Unit is powered by car cigarette 12V socket. It can be operated in 100 different channels in the frequency band 88.1MHz to 107.9MHz with 200kHz channel spacing (88.1, 88.3, 88.7, 88.9, ... ,107.9MHz).

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 46.0dBμV/m at 3m

Allowed field strength of production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production was 49.0dBμV/m at 3m, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.024\mu W$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.024μW.

The SAR Exclusion Threshold Level at 107.9MHz:

= $3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

= $3.0 \cdot 5 / \sqrt{0.1079} \text{ mW}$

= 45.7 mW

Since the above maximum output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.