

Analysis Report

Report No.: 13090353HKG-003

The Equipment Under Test (EUT) is a FM Transmitter with scanning function connects to any portable audio device that has a headphone-type connection such as a MP3 or CD player. The main function is used to transmit the music stored in yours audio device that can be receiving it by yours radio. It is powered by a cigarette adaptor. The backlight will be lighted and the transmitter displays the frequency last used while plug into the the car's power outlet. Press and hold the scan button that below the LED panel, it can search for the clear channel to eliminate interference from broadcast radio channels that are used. The transmitting frequency covers the complete FM band from 88.1 to 107.9MHz in 0.2MHz step (i.e. 88.1MHz, 88.3MHz, 88.5MHz and so on). The transmitting frequency is shown on the LED panel. There is three buttons below the scan button, hold down 2M unit M1, M2 and M3 all flash on the display, press 1/up or 3/down to find the desired frequency and wait until the display stops flashing. Hold down 1/up, 2M or 3/down for two seconds to save the display frequency to M1, M2 or M3 respectively.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 47dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 50dB μ V/m at 3m in frequency 88.1MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.00003\text{mW}$

Thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.00003mW.

The SAR Exclusion Threshold Level for 88.1MHz when the minimum test separation distance is < 50mm:

= $[474 \cdot (1 + \log_{10}(f(\text{MHz}))) / 2]$

= 250.04mW

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