Analysis Report

Report No.: 13070963HKG-001

The Equipment Under Test (EUT) is a 7-inch Tablet with Android Operating System. The EUT equipped with a 7-inch LCD display (with touch screen), camera, USB, SD interface, loudspeaker and headphone output. The EUT contains a WiFi module complying with IEEE 802.11b/g/n(HT20)/n(HT40) standards that operating in 2.4GHz ISM frequency band (2400MHz – 2483.5MHz). The EUT is powered by an external AC/DC adaptor with 5VDC output. The adaptor accepts 100-240VAC. The applicant declared that the EUT does not contain Bluetooth RF module.

WiFi Antenna Type: Internal, Integral (single antenna)

802.11b, 802.11g, 802.11n (HT20):
2412MHz – 2462MHz, 11 channels, 5MHz spacing

802.11n (HT40):
2422MHz – 2452MHz, 7 channels, 5MHz spacing

The WiFi modules was tested in according with the following power output and in actual application the below limit shall not be exceeded.

Operating Mode	Nominal Radiated Field Strength	Production Tolerance	Antenna Gain
802.11b	101.8dBµV/m at 3m	±3dB	0dBi
802.11g	93.5dBµV/m at 3m	±3dB	0dBi
802.11n (HT20)	93.4dBµV/m at 3m	±3dB	0dBi
802.11n (HT40)	92.8dBµV/m at 3m	±3dB	0dBi

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 104.8dBµV/m at 3m in frequency 2.412GHz at 802.11b mode, thus;

The EIRP = [(FS*D) ^2*1000 / 30] = 9.1mW

Conducted power = Radiated Power (EIRP) – Antenna Gain
So;

Conducted Power = 9.1mW.

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.462) mW
= 9.56 mW

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.