RF Exposure

The Equipment Under Test (EUT) is a Scanner with Wi-Fi function operating at 2412-2462MHz. 11 channels with 5MHz channel spacing for 802.11b/g/n-HT20, 7 channels with 5MHz channel spacing for 802.11n-HT40. The EUT is powered by DC 3.7V by lithium battery which can be charged by DC 5V though micro USB port. For more detailed features description, please refer to the user's manual.

WIFI Function:
Modulation Type: CCK, BPSK, QPSK, 16QAM, 64QAM, DQPSK, DBPSK
Antenna Type: Internal antenna
Antenna Gain: 2.2 dBi
The conducted average output power specified: 7.5dBm (Tolerance: +/- 2dB)

IEEE 802.11b (CCK, 1Mbps)	
Frequency (MHz)	Output in dBm (Average Reading)
Low Channel: 2412	8.10
Middle Channel: 2437	9.00
High Channel: 2462	9.30

IEEE 802.11g (16QAM, 6Mbps)	
Frequency (MHz)	Output in dBm (Average Reading)
Low Channel: 2412	7.84
Middle Channel: 2437	8.64
High Channel: 2462	9.12

IEEE 802.11n-HT20 (64QAM, MCS0)	
Frequency (MHz)	Output in dBm (Average Reading)
Low Channel: 2412	7.69
Middle Channel: 2437	8.51
High Channel: 2462	9.03

IEEE 802.11n-HT40 (64QAM, MCS0)	
Frequency (MHz)	Output in dBm (Average Reading)
Low Channel: 2422	7.49
Middle Channel: 2437	7.91
High Channel: 2452	8.41

The maximun conducted average output power for the EUT is 9.30dBm in the frequency 2462MHz at IEEE 802.11b which is within the production variation.

The minimun conducted average output power for the EUT is 7.49dBm in the frequency 2422MHz at IEEE 802.11n-HT40 which is within the production variation.

The maximun conducted output power specified is 9.5dBm = 8.91mW
The source- based time-averaging conducted output power
= 8.91 * Duty factor mW (where Duty Factor$\leqslant$1)
= 8.91 mW

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 source-based time-averaging conducted output power is well below the SAR exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.