

RF Exposure

The Equipment Under Test (EUT) is a Borecam PRO Wireless Borescope with Wi-Fi function operating at 2437MHz for 802.11b/g/n-HT20/n-HT40. The EUT is powered by 3.7V with rechargeable battery and D.C. 5.0V from adaptor. For more detailed features description, please refer to the user's manual.

Modulation Type: BPSK, QPSK, 16QAM, 64QAM for OFDM; CCK, DQPSK, DBPSK for DSSS.

Antenna Type: Integral antenna.

Antenna Gain: Each 0.5dBi.

Average output power:

The nominal average conducted output power specified: 8.5 dBm (Tolerance: ± 1 dB)

Average output power measurement result:

Operation mode	Output in dBm (Average Reading)
ANT1-IEEE 802.11b-2437MHz	8.7
ANT1-IEEE 802.11g-2437MHz	8.9
ANT1-IEEE 802.11n-HT20-2437MHz	8.7
ANT1-IEEE 802.11n-HT40-2437MHz	8.9
ANT2-IEEE 802.11b-2437MHz	9.3
ANT2-IEEE 802.11g-2437MHz	8.9
ANT2-IEEE 802.11n-HT20-2437MHz	8.9
ANT2-IEEE 802.11n-HT40-2437MHz	9.1
MIMO-IEEE 802.11n-HT20-2437MHz	8.3
MIMO-IEEE 802.11n-HT40-2437MHz	8.5

According to the KDB 447498:

The maximum average conducted output power is 9.3 dBm in IEEE 802.11b(Ant1, SISO mode) which is within the production variation.

The minimum average conducted output power is 8.3 dBm in IEEE 802.11n-HT20 (MIMO mode) which is within the production variation.

The maximum conducted output power specified is 9.5 dBm = 8.9mW

The source- based time-averaging conducted output power

= 8.9 * Duty factor mW (where Duty Factor \leq 1)

= 8.9 mW

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The SAR Exclusion Threshold Level:

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

$= 3.0 * 5 / \sqrt{2.437} \text{ mW}$

$= 9.61 \text{ mW}$

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