

RF Exposure Requirements

Product Description: USB wireless lan card

Model No.: ET-UN677

FCC ID: AFY ET-UN677

According to the KDB-447498, the following RF exposure evaluation shall to demonstrate RF exposure compliance.

Tx frequency range: 2412~2462MHz

Antenna-to-tissue separation: <20 cm

For Chain A

Maximum Conducted Output Power: 12.85dBm

(at the 2437MHz channel of 802.11b mode with 11M rate at chain A)

Antenna Gain: 0.9dBi for chain A

Maximum Output Power: 23.71mW

Maximum Duty Factor: 100%

$60/f(\text{GHz}) \text{ mW} = 24.62 \text{ mW}$

Source-based time-averaged conducted output power is 23.71 mW =< 60/f

For Chain B

Maximum Conducted Output Power: 9.96dBm

(at the 2437MHz channel of 802.11b mode with 11M rate at chain B)

Antenna Gain: 3.0 dBi for chain B

Maximum Output Power: 23.71mW

Maximum Duty Factor: 100%

$60/f(\text{GHz}) \text{ mW} = 24.62 \text{ mW}$

Source-based time-averaged conducted output power is 23.71 mW =< 60/f

For Chain A and Chain B (Antenna gain: 0.9 dBi for chain A, 3.0 dBi for chain B)

Test mode	Frequency MHz	Reading chain A (dBm)	Reading chain B (dBm)	EIRP chain A (mW)	EIRP chain B (mW)	Total EIRP (mW)
802.11n HT20 (MCS15)	2412	9.52	7.21	11.02	10.50	21.52
	2437	9.34	7.44	10.57	11.07	21.64
	2462	9.05	7.76	9.89	11.91	21.80
802.11 HT40 (MCS15)	2422	8.26	7.16	8.24	10.38	18.62
	2437	9.12	7.56	10.05	11.38	21.43
	2452	8.33	7.36	8.38	10.86	19.24

Maximum Output Power: 21.80mW

Maximum Duty Factor: 100%

$60/f(\text{GHz}) \text{ mW} = 24.37 \text{ mW}$

Source-based time-averaged conducted output power is 21.80 mW $\leq 60/f$

Therefore, the transmitter comply with the RF exposure requirements and the SAR is not required.