

RF EXPOSURE REPORT

Applicant	BenQ Corporation
Address	16 Jihu Road, Neihu, Taipei 114, Taiwan

Manufacturer or Supplier	BenQ Corporation
Address	16 Jihu Road, Neihu, Taipei 114, Taiwan
Product	Wireless USB Adapter
Brand Name	BenQ
Model	TDY31
Additional Model & Model Difference	N/A
Date of tests	Aug. 26, 2021 ~ Sep. 26, 2021

- FCC Part 2 (Section 2.1091)
- KDB 447498 D01
- IEEE C95.1

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Andy Zhu
Supervisor / EMC Department

Approved by Glyn He
Assistant Manager / EMC Department




Date: Jan. 04, 2022

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Test Report No.: FM2107WDG0280

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Test Report No.: FM2107WDG0280

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2107WDG0280	Original release	Jan. 04, 2022

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Test Report No.: FM2107WDG0280

1. CERTIFICATION

PRODUCT: Wireless USB Adapter
BRAND NAME: BenQ
MODEL NO.: TDY31
ADDITIONAL MODEL: N/A
FCC ID: JVPTDY31
TEST SAMPLE: ENGINEERING SAMPLE
APPLICANT: BenQ Corporation
STANDARDS: FCC Part 2 (Section 2.1091)
KDB 447498 D01
IEEE C95.1



2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$Pd = (Pout * G) / (4 * pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Frequency Band	Antenna Gain (dBi)	Antenna Type
Wi-Fi 2.4GHz	2	FPC Antenna
Wi-Fi 5GHz (5150-5250MHz)	2	FPC Antenna
Wi-Fi 5GHz (5250-5350MHz)	2	FPC Antenna
Wi-Fi 5GHz (5500-5725MHz)	2	FPC Antenna
Wi-Fi 5GHz (5725-5850MHz)	2	FPC Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
802.11b	2412-2462MHz	13	+2	11	15
802.11g	2412-2462MHz	13	+2	11	15
802.11n HT20	2412-2462MHz	13	+2	11	15
802.11n HT40	2422-2452MHz	12	+2	10	14
Wi-Fi 5GHz(Band1)	5150-5250MHz	17	+2	15	19
Wi-Fi 5GHz(Band2)	5250-5350MHz	17	+2	15	19
Wi-Fi 5GHz(Band3)	5500-5725MHz	15	+2	13	17
Wi-Fi 5GHz(Band4)	5725-5850MHz	15	+2	13	17



The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
802.11b	2462	14.46
802.11g	2462	14.82
802.11n HT20	2412	13.93
802.11n HT40	2452	12.94
Wi-Fi 5GHz(Band1)	5340	18.56
Wi-Fi 5GHz(Band2)	5260	17.40
Wi-Fi 5GHz(Band3)	5700	15.60
Wi-Fi 5GHz(Band4)	5795	16.90

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
Wi-Fi 2.4GHz	15	2	20	0.00997	1.0
Wi-Fi 5GHz	19	2	20	0.02505	1.0

Note:The Wi-Fi 2.4GHz and Wi-Fi 5GHz can not transmit simultaneously.

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