Maximum Permissible Exposure Evaluation

FCC ID: 2AKUR-NVR8008T-QWS

1. Client Information

Applicant	:	Hangzhou Jufeng Technology Co., Ltd.
Address	:	Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou China
Manufacturer	:	Hangzhou Jufeng Technology Co., Ltd.
Address	:	Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou China

2. General Description of EUT

EUT Name	:	NVR	
Models No.	:	NVR8008T-QWS, NVR8004T-UWS, NVR8004T-UWS-V2, NVR8008T-PWS, NVR8004T-QWDS, JF-NVR8008T-QWS, JF-NVR8004T-UWS, JF-NVR8004T-UWS-V2, JF-NVR8008T-PWS, JF-NVR8004T-QWDS, NVR8008TR-QWS, NVR8008TR-QWDS, NVR8004TR-UWS, JF-NVR8008TR-QWS, JF-NVR8004TR-UWS	
Model Different:	:	All PCB boards and circuit diagrams are the same, the only difference is that the different appearance have different models	
Brand Name	:	----	
Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
		Number of Channel:	11 channels
		RF Output Power:	802.11b: 14.407dBm 802.11g: 14.752dBm 802.11n (HT20): 13.333dBm 802.11n (HT40): 11.917dBm
		Antenna Gain:	5dBi dipole Antenna
Power Rating	:	Input: AC 100-240V 50/60Hz 1.5A Max	
Software Version	:	NBD8008R-PWS-V2	
Hardware Version	:	NBD80XXS-3536D V1.03	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	the MPE report used the EUT(20210518-15_01-1#).	

MPE Calculations for WIFI

1. **Antenna Gain:**
   Dipole Antenna:5dBi.

2. **EUT Operation Condition:**
   Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3. **Exposure Evaluation:**
   Equation from page 18 of OET Bulletin 65, Edition 97-01
   $$S=(PG)/4\pi R^2$$
   Where
   S: power density
   P: power input to the antenna
   G: power gain of the antenna in the direction of interest relative to an isotropic radiator.
   R: distance to the center of radiation of the antenna

4. **Test Result:**

Worst Maximum MPE Result								
Mode	N_{TX}	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm^2) [S]
802.11b	1	2412	13.542	14±1	15	5	20	0.0199
		2437	13.944	14±1	15	5	20	0.0199
		2462	14.407	14±1	15	5	20	0.0199
802.11g	1	2412	13.736	14±1	15	5	20	0.0199
		2437	14.618	15±1	16	5	20	0.0250
		2462	14.752	15±1	16	5	20	0.0250
802.11n(HT20)	1	2412	12.688	13±1	14	5	20	0.0158
		2437	13.158	13±1	14	5	20	0.0158
		2462	13.333	13±1	14	5	20	0.0158
802.11n(HT40)	1	2422	11.716	12±1	13	5	20	0.0126
		2437	11.83	12±1	13	5	20	0.0126
		2452	11.917	12±1	13	5	20	0.0126

Note:
(1) N_{TX}= Number of Transmit Antennas
(2) RF Output power specifies that Maximum Conducted Peak Output Power.

5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm^2)
300-1,500	**F/1500**
1,500-100,000	**1.0**

For 2.4WIFI:2412~2462 MHz

MPE limit S: 1mW/ cm^2

The MPE is calculated as **0.0250** ***mW / cm² < limit 1mW / cm²***. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

Note

For a more detailed features description, please refer to the RF Test Report.

6. Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----END OF REPORT-----