
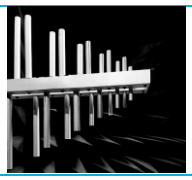
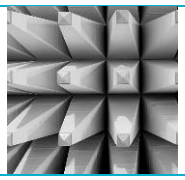

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Maximum Permissible Exposure (MPE) & Exposure evaluation

Report identification number: 1-3065/16-01-11-A

Certification numbers and labeling requirements	
FCC ID	X46WP03 QOQ-WGM110 (WiFi module)
IC number	8816A-WP03 5123A-WGM1110 (WiFi module)
HVIN (Hardware Version Identification Number)	WIP620-2
PMN (Product Marketing Name)	WIP620
FVIN (Firmware Version Identification Number)	-/-
HMN (Host Marketing Name)	-/-

Version –A: WiFi module added

This test report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Document authorized:

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Radio Communications & EMC

Prediction of MPE limit at given distance - FCC

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 = Antenna gain (declared by provider)
R = Distance to the center of radiation of the antenna

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled “Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure”

Frequency Range (MHz)	Power Density (mW/cm^2)	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

		< 1500 MHz	> 1500 MHz
	Technology	S2View (915 MHz)	WLAN (2400 MHz)
P	Maximum power	20 dBm	18 dBm
R	Distance	20 cm	20 cm
G	Antenna gain	1.6 dBi	0.0 dBi
S	MPE limit for uncontrolled exposure	0.6 mW/cm^2	1 mW/cm^2
	Calculated Power density:	**0.029 mW/cm^2**	**0.013 mW/cm^2**
	Colocation:	**4.79 %**	**1.29 %**
	Sum (worst case/all transmitters active):	**6.08 %**	

This prediction demonstrates the following:

The power density levels for FCC at a distance of 20 cm are below the maximum levels allowed by regulations.

Prediction of MPE limit at given distance - IC

RSS-102, Issue 5, 2.5.2

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2}\ f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

	Technology	WLAN 2400	Proprietary FHSS (915 MHz)	-/-
P	Max power	18 dBm	20 dBm	
G	Antenna gain	0.0 dBi	1.6 dBi	
S	MPE limit for uncontrolled exposure	2710 mW	1400 mW	
	Calculated output power:	65 mW	144.5 mW	**Sum**
	Colocation GSM 850 + WLAN + FHSS 915	**2.4 %**	**---**	
	Colocation GSM 850 + WLAN + FHSS 915	**---**	**10.3 %**	**12.7 %**

Conclusion: for applications where minimum distance to radiating element is 20cm Annex C of RSS-102 should be filled out.