

## RF Exposure statement

**TÜV SÜD Japan Ltd.**  
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To whom it may concern:

TÜV SÜD Japan is authorized as an agency from **Applicant: Yuyama Mfg. Co., Ltd. (FCC ID: WSLYG1540002, IC: 8213A-YG1540002)** to act on their behalf in all matters relating to applications for equipment authorization, including testing the device and the signing of all documents relating to these matters.

### MAXIMUM PERMISSIBLE EXPOSURE

#### FCC RULES

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz \* = Plane-wave equivalent power density

## IC RULES

IC RSS-102 Issue 5, Section 2.5.2 Exemption Limits for Routine Evaluation (RF Exposure Evaluation)

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 operate as follows:

- Below 20MHz 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).

## MPE CALCULATIONS

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

where

Pd = power density in mW/cm<sup>2</sup>

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

## LIMITS

From FCC §1.1310 Table 1 (B), the maximum value of S =  $180 / (13.56)^2 = 0.979$  mW/cm<sup>2</sup>

From IC RSS-102 Issue 5, Section 2.5.2, e.i.r.p.  $\leq 1$  W

## RESULTS

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**.

For IC, please refer to the value of the output power.

(MPE distance is greater than 20 cm)

Frequency (MHz)	Output Power (dBm)	Antenna Gain (dBi)	Pout * G (mW)	MPE Distance (cm)	FCC Power Density (mW/cm <sup>2</sup> )	IC Power Density (W/m <sup>2</sup> )
13.56	-38.2	-63.80	0.0000000000631	20.0	0.000000000000126	0.0000000000000126