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1.0 Maximum Permissible Exposure Evaluation (Supplements the test report.)

The measured power is considered for the intended use of the device and resulting RF exposure to the user.

1.2 Criteria

Section Reference	Date
447498 D01 General RF Exposure Guidance v06	2 Oct 2020

1.3 Procedure

Using measurement of peak power and considering the intended application, determine the permissible exposure level, applicability of exclusion, or whether additional exposure tests (SAR) are indicated. When applicable justify conclusion for selected exposure level and separation distance.

1.4 Power to Exposure Calculation

This device is operated typically indoors, either wall-mounted or on a desk. The operating band is 24000-24250 MHz. Power is determined from the measured field strength. The uncontrolled public separation distance is 20 cm.

This device also contains a co-located transmitter that has an existing modular approval (FCC ID: O7P-362).

Table 1.4.1 Transmitter Power Calculation

Transmitter Frequency (Range), MHz	Measured Power Field Strength dBµV/m[a]	At Distance	EIRP Power dBm	Source Duty Cycle Factor dB	Calculated Average Power dBm	Calculated EIRP mW
24130	98.77	3 m	3.54	0	3.54	2.26
2412 - 2462	-	-	19.9[b]	0	19.9	97.7

[a]This is the peak measurement.
[b]Antenna gain is 0dBi, conducted output power is 19.9dBm (Per test report 13-0186 by US Tech, Francis Circle Alpharetta, GA 30004PH: 770-740-0717 Fax: 770-740-1508 www.ustech-lab.com)

Total device output power = 2.26mW + 97.7mW = 99.96mW

1.5 SAR Exemption Calculation – FCC

FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	$(180/f^2)$*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

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

Field density is determined at 20 cm as:

$S = EIRP / (4 \pi 20^2)$ Ref. FCC Bulletin OET-65 Equation (4)
$S = 99.96 \text{ mW} / 5026.55 \text{ cm}^2$
$S = 0.020 \text{ mW/cm}^2$

Therefore $0.020 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$

This device meets the **OET 65 Limits for General Population/Uncontrolled Exposure,** limit for field density of 1 mW/m^2 criteria in table (B), row 1500-100000 MHz.

Signed:

Larry Finn

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