

US Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Models:

FCC Part 15 Certification/ RSS 247
HSW-2420
4492A-2420
26-0013
March 10, 2026
Murata Electronics North America
WIT2420

Maximum Permissible Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S** as per the respective limits in Table 1 below, at a distance, d, of 20 cm (Mobile condition) from the EUT.

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 ²)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

Therefore, for:

MPE for 2400-2483.5 MHz:

Limit: 1.0 mW/cm²

Peak Power (dBm) = 17.83 dBm

Peak Power (Watts) = 0.061 W

Gain of Transmit Antenna = 9.0 dBi = 7.9 numeric (max gain antenna)

d = Distance = 20 cm = 0.2 m

$$\begin{aligned} S &= (PG / 4\pi d^2) = \text{EIRP} / 4A = 0.061 (7.9) / 4\pi * 0.2^2 \\ &= 0.4819 / 0.5030 = 0.9092 \text{ W/m}^2 \\ &= (0.9092 \text{ W/m}^2) (1\text{m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\ &= 0.09092 \text{ mW/cm}^2 \end{aligned}$$

which is << less than S = 1.0 mW/cm²

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RSS-102 (Issue 6), 5.3.2 compliance for 2400 MHz – 2483.5 MHz for the Murata Electronics North America, Inc. model: WIT2420:

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;

In this case $f = 2440$ MHz

$$1.31 * 10^{-2} * 2440^{0.6834} = 2.7 \text{ W}$$

$$\text{EUT max EIRP} = 17.83 \text{ dBm} + (9.0 \text{ dBi}) = 26.83 \text{ dBm EIRP} = 0.482 \text{ W}$$

Which is << than 2.7 W

Meets the requirements for General Public (Uncontrolled Environments) according to Table 7 of RSS-102 (I6).

All calculations performed by:

Date: March 10, 2026

Test Engineer: Gabriel Medina

Signature: 