

6. Measurement Data (continued)

6.9. Public Exposure to Radio Frequency Energy Levels (15.247(i) (1.1307 (b)(1)) RSS-GEN 5.5, RSS 102

6.9.1. Note: The following equation is used to determine the output power from the measured worst case field strength:

$$P = \frac{(E \times d)^2}{(30 \times G)}$$

P = the power in Watts.

E = the measured maximum field in V/m

G = the numeric gain of the transmitting antenna over an isotropic radiator.

d = the distance in meters of the field strength measurement.

Channel	Frequency	Peak Field Strength	Distance	Antenna Gain ¹	Measured Output Power
	(GHz)	(dBμV/m)	(m)	(dBi)	(mW)
N/A	24.24	106.50	3.0	12.5	0.7535659

Channel	MPE Distance (cm)	DUT Output Power (dBm)	DUT Antenna Gain (dBi)	Power Density		Limit (mW/cm ²)	Result
				(mW/cm ²)	(W/m ²)		
	(1)	(2)	(3)	(4)		(5)	
N/A	20.0	-1.23	12.5	0.0026659	0.0266595	1	Compliant

$$PD = \frac{OP + AG}{(4 \times \pi \times d^2)}$$

PD = Power Density (mW/cm²)

OP = DUT Output Power (dBm)

AG = DUT Antenna Gain (dBi)

d = MPE Distance (cm)

- Reference CFR 2.1093(b): For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.
- Sections 6.2 of this test report.
- Antenna gain data provided by the client.
- Power density is calculated from field strength measurement and antenna gain.
- Reference CFR 1.1310, Table 1: Limits for Maximum Permissible Exposure (MPE), Section (B): Limits for General Population/Uncontrolled Exposure.