

## RF Exposure (SAR)

Basic Standard	1.1307, 1.1310, 2.1091 & 2.1093
Sample Number	603794
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Use the barometric pressure reported at: <http://www.theweathernetwork.com/weather/CABC0308>

### Test Limits

#### FCC1.1310:

The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in § 1.1307(b),

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 Exposures</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
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	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
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

### Test Setup

FCC Part 1.1310, 2.1091 and OET Bulletin 65 Edition 97-01 MPE Calculations for a Mobile Unit that is using an Aperture Antenna. In order to demonstrate compliance with MPE requirements, the following information is typically needed:

- Estimate the minimum separation distance between an antenna and persons required to satisfy power density limits.
- Antenna installation and device operating instructions for installers, and the parties responsible for ensuring compliance with the RF exposure requirements

**Calculation Method of RF Safety Distance:**

OET Bulletin 65 Page 29 Equation 18:

$$S_{ff} = \frac{PG}{4\pi R^2} \quad (18)$$

where:  $S_{ff}$  = power density (on axis)

P = power fed to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the point of interest

**Test Results:**

**Calculations**

**- In Beam path**

Frequency(GHz)	Measured Peak Conducted Output Power at Antenna Terminal (mW)	Gain of Antenna(G)	Recommended Minimum Safe Distance in Beam path Uncontrolled S=1.0mW/ cm <sup>2</sup> (m)	Recommended Minimum safe distance in Beam Path controlled S=5.0mW/ cm <sup>2</sup> (m)
14.00	27101.92	13803.84	54.56	24.40
14.25	27101.92	14354.89	55.64	24.88
14.50	24154.61	14791.08	53.32	23.84

**- Off-Axis**

Frequency(GHz)	Measured Peak Conducted Output Power at Antenna Terminal (mW)	Gain of Antenna at 4 degree (G)	Recommended Minimum Safe Distance off-axis Uncontrolled S=1.0mW/ cm <sup>2</sup> (m)	Recommended Minimum safe distance off-axis controlled S=5.0mW/ cm <sup>2</sup> (m)
14.00	27101.92	28.64	2.49	1.11
14.25	27101.92	33.57	2.69	1.20
14.50	24154.61	37.93	2.70	1.21

**Conclusion**

In the EUT's User Manual, the FCC Radio Frequency Exposure information will be inserted.