

RF Exposure (SAR)

Basic Standard	1.1307, 1.1310, 2.1091 & 2.1093
Sample Number	603794
Calculated By	Jeremy LEE

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 ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
(B) 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
300–1500 .....	.....	.....	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 ² (m)	Recommended Minimum safe distance in Beam Path controlled S=5.0mW/ cm ² (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 ² (m)	Recommended Minimum safe distance off-axis controlled S=5.0mW/ cm ² (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.