

RADIO FREQUENCY EXPOSURE**Limit**

According to §1.1310 and §2.1091 RF exposure is calculated.

Table: Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Power Density (S) (mW/cm²)
0.3–1.34	*(100)
1.34–30	*(180/f ²)
30–300	0.2
300–1500	f/1500
1500–100,000	1.0

F = frequency in MHz

* = Plane-wave equivalent power density

Maximum Permissible Exposure

The MPE was calculated at 20cm to show compliance with the power density limit.

$$S = PG/4\pi R^2$$

S = Power density

P = power input to antenna

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

R = distance to the center of radiation of the antenna.

Note:

1. Manufacturer declared that the maximum antenna gain is -1.09 dBi (Max.) for bluetooth .
2. Manufacturer declared that the nearest distance between human and the EUT is 20cm.
3. Only record worst case data.

Test Results

2.4G Bluetooth:

Test	Channel	ANT Power (dBm)	ANT Max. Tune Up Power (dBm) Peak	ANT Max. Tune Up Power (mW) Peak	ANT MPE (mW/cm ²)	Limit (mW/cm ²)
GFSK	00	4.65	5.0±1.0	3.9811	0.0006	1.0
	39	4.79	5.0±1.0	3.9811	0.0006	1.0
	78	4.26	5.0±1.0	3.9811	0.0006	1.0
$\pi/4$ -DQPSK	00	4.82	5.0±1.0	3.9811	0.0006	1.0
	39	5.26	5.0±1.0	3.9811	0.0006	1.0
	78	4.12	5.0±1.0	3.9811	0.0006	1.0
8-DPSK	00	4.92	5.0±1.0	3.9811	0.0006	1.0
	39	5.97	5.0±1.0	3.9811	0.0006	1.0
	78	5.39	5.0±1.0	3.9811	0.0006	1.0
BLE	00	-4.65	0.0±1.0	1.2589	0.0002	1.0
	19	-4.78	0.0±1.0	1.2589	0.0002	1.0
	39	-3.58	0.0±1.0	1.2589	0.0002	1.0

Note: The estimation distance is 20cm

Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.