

RF Exposure Evaluation

LIMIT

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

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

Note: f = frequency in MHz

EVALUATION METHOD

Transmission formula: $Pd = (Pout * G) / (4 * \pi * r^2)$

Where

Pd = power density in mW/cm², **Pout** = output power to antenna in mW, **G** = gain of antenna in linear scale;

Pi = 3.1416, **R** = distance between observation point and center of the radiator in cm

TEST RESULT

Passed

Not Applicable

Frequency range (MHz)	Type	Conducted Average Power (dBm)	Maximum Tune-up (dBm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
848.8	GSM850	32.71	33.00	0.46960	0.5659	Pass
1880.0	PCS1900	30.52	31.00	0.34334	1.000	Pass
1852.40	WCDMA Band 2	23.99	24.00	0.07477	1.000	Pass
1752.60	WCDMA Band 4	23.39	24.00	0.07477	1.000	Pass
846.60	WCDMA Band 5	22.85	23.00	0.04696	0.5644	Pass
1909.3	LTE Band 2	25.14	26.00	0.09677	1.000	Pass
1750	LTE Band 4	24.74	25.00	0.07687	1.000	Pass
824.7	LTE Band 5	23.54	24.00	0.06106	0.5498	Pass
2565	LTE Band 7	25.34	26.00	0.09677	1.000	Pass
699.7	LTE Band 12	24.40	25.00	0.07687	0.4665	Pass
784.5	LTE Band 13	24.05	24.00	0.06106	0.5230	Pass
706.5	LTE Band 17	24.20	25.00	0.07687	0.4710	Pass
1913.5	LTE Band 25	25.21	26.00	0.09677	1.000	Pass
824.7	LTE Band 26	23.02	24.00	0.06106	0.5498	Pass
2560	LTE Band 41	25.00	26.00	0.09677	1.000	Pass
2441	BT-EDR	5.77	6.00	0.00111	1.0000	Pass
2440	BT-BLE	-0.32	0.00	0.00028	1.0000	Pass
2412	802.11g	16.19	17.00	0.01396	1.0000	Pass
821.5	LTE Band 26	24.01	25.00	0.07687	0.5477	Pass

Note:

- 1) The exposure evaluation safety distance is 20mm.