

FCC MPE CALCULATION (FCC ID: KMH-14H317-NA1)

RF Exposure Requirements:

47 CFR §1.1307(b)

RF Radiation Exposure Limits:

47 CFR §1.1310

RF Radiation Exposure Guidelines:

FCC OST/OET Bulletin Number 65

EUT Frequency Band:

GSM850: 824.2-848.8MHz
GSM1900: 1850.2-1909.8MHz
WCDMA Band 2: UL: 1850- 1910MHz
WCDMA Band 4: UL: 1710- 1755MHz
WCDMA Band 5: UL: 824- 849MHz
LTE Band 2: UL: 1850-1910MHz
LTE Band 4: UL:1710-1755MHz
LTE Band 5: UL:824-849MHz
LTE Band 7: UL:2500-2570MHz
LTE Band 12: UL:699-716MHz
LTE Band 13: UL:777-787MHz
LTE Band 17: UL: 704-716MHz
LTE Band 29: DL: 717-728MHz (UE Receive Only)
LTE Band 38: UL: 2570-2620MHz
LTE Band 66: UL:1710-1780MHz
LTE Band 71: UL: 663-698MHz
5G NR n2: UL: 1850-1910MHz
5G NR n5: UL:824-849MHz
5G NR n7: UL:2500-2570MHz
5G NR n41: UL:2496-2690MHz
5G NR n66: UL:1710-1780MHz
5G NR n71: UL:663-698MHz
5G NR n77-L: UL:3450-3550MHz
5G NR n77-H: UL:3700-3980MHz
5G NR n78-L: UL:3450-3550MHz
5G NR n78-H: UL: 3700-3800MHz

Limits for General Population/Uncontrolled Exposure in the band of:

300 - 1500 MHz,

Power Density Limit:

f/1500 mW/cm²

Limits for General Population/Uncontrolled Exposure in the band of:

1500 - 100,000 MHz

Power Density Limit:

1 mW / cm²

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$

Where,
S = Power Density
P = Power Input to Antenna
G = Antenna Gain
R = distance to the center of radiated antenna

Prediction distance 20 cm

Radio	Frequency (MHz)	Max EIRP (dBm)	Separation distance (cm)	Power Density (mW/ cm ²)	MPE Limit (mW/ cm ²)
GSM850	824.2-848.8MHz	31.76	20	0.298	0.443
GSM1900	1850.2-1909.8MHz	26.68	20	0.093	0.380
WCDMA B2	1850- 1910MHz	31.72	20	0.296	1
WCDMA B4	1710- 1755MHz	28.63	20	0.145	1
WCDMA B5	824- 849MHz	29.83	20	0.191	0.549
LTE Band2	1850-1910MHz	31.94	20	0.311	1
LTE Band4	1710-1755MHz	27.82	20	0.120	1
LTE Band5	824-849MHz	29.5	20	0.177	0.549
LTE Band 7	2500-2570MHz	32.07	20	0.320	1
LTE Band12	699-716MHz	31.33	20	0.270	0
LTE Band13	777-787MHz	31.34	20	0.271	0.518
LTE Band17	704-716MHz	31.2	20	0.262	0.469
LTE Band38	2570-2620MHz	32.08	20	0.321	1
LTE Band66	1710-1780MHz	27.79	20	0.120	1
LTE Band71	663-698MHz	32.12	20	0.324	0.466
5G NR n2	1850-1910MHz	31.83	20	0.303	1
5G NR n5	824-849MHz	29.87	20	0.193	0.566
5G NR n7	2500-2570MHz	32.83	20	0.382	1
5G NR n41	2496-2690MHz	32.96	20	0.393	1
5G NR n66	1710-1780MHz	27.86	20	0.122	1
5G NR n71	663-698MHz	29.99	20	0.198	0.442
5G NR n77-L	3450-3550MHz	27.89	20	0.122	1
5G NR 77-H	3700-3980MHz	27.96	20	0.124	1
5G NR 78-L	3450-3550MHz	27.89	20	0.122	1
5G NR 78-H	3700-3800MHz	27.87	20	0.122	1

The above results show that the device complies with the MPE requirement.

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