RF Exposure evaluation

FCC ID: **LTQIHU4**

RF Exposure Evaluation

Standards
OET Bulletin 65 Edition 97-01 August 1997
FCC 47 CFR §1.1307
FCC 47 CFR §1.1310

Test limits

As specified in Table 1B of 47 CFR 1.1310 – Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure.

Frequency range (MHz)	*Power density (mW/cm^2)*
300 – 1,500	f/1500
1,500 – 100,000	1.0

Equation OET bulletin 65, page 18, edition 97-01: $S = \frac{PG}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$

Where:

S = power density
P = power input to the 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

Following antenna gain values were considered as far as they apply:

BT GFSK (1-DH1)

Band	Channel No.	Frequency [MHz]	Peak Power [dBm]	Limit [dBm]	Margin to Limit [dB]	E.I.R.P [dBm]
2.4 GHz ISM	0	2402	2.1	21.0	18.9	3.9
	39	2441	4.3	21.0	16.7	6.1
	78	2480	4.6	21.0	16.4	6.4

BT π/4 DQPSK (2-DH1)

Band	Channel No.	Frequency [MHz]	Peak Power [dBm]	Limit [dBm]	Margin to Limit [dB]	E.I.R.P [dBm]
2.4 GHz ISM	0	2402	0.4	21.0	20.6	2.2
	39	2441	2.8	21.0	18.2	4.6
	78	2480	3.2	21.0	17.8	5.0

BT 8-DPSK (3-DH1)

Band	Channel No.	Frequency [MHz]	Peak Power [dBm]	Limit [dBm]	Margin to Limit [dB]	E.I.R.P [dBm]
2.4 GHz ISM	0	2402	0.9	21.0	20.1	2.7
	39	2441	3.0	21.0	18.0	4.8
	78	2480	3.2	21.0	17.8	5.0

Band	Mode	Duty Cycle	Frequency (MHZ)	Maximum Conducted output power (dBm)	Equivalent conducted output power (mW)	FCC MPE Limit (mW/cm²)	MPE Value using Max gain	Separation distance (cm)	Verdict
Bluetooth	GFSK 1-DH1	100.0%	2480.0	4.6	2.88	1000	0.0009	20	PASS

Yours sincerely,

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