

FCC RF Exposure Compliance for Simultaneous Operations

Configurations for Simultaneous Operations

Configuration 1: BT/BLE + WCDMA/LTE

Configuration 2: WiFi 2.4 + WCDMA/LTE

Configuration 3: WiFi 5 + WCDMA/LTE

Power Density is calculated from Maximum Conducted Power and Antenna Gain at prediction distance

Maximum of Conducted and Radiated Output Power is used in the calculation. Therefore negative values for antenna gain have been replaced by 0 dBi.

RF Function	BT	BLE	WiFi 2.4	WiFi 5GHz	WCDMA B2	WCDMA B4	WCDMA B5	LTE B2	LTE B4	LTE B5	LTE B7	LTE B12	LTE B13	LTE B25	LTE B26_1	LTE B26_2	LTE B38	LTE B41	Σ of MPE ratios
Frequency (MHz)	2402	2402	2412	5180	1852.4	1712.4	826.4	1850.7	1710.7	824.7	2502.5	699.7	779.5	1850.7	814.7	824.7	2572.5	2498.5	
Conducted Output Power (dBm)	7.00	4.00	18.00	12.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	
Tune Up Tolerance (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Output Power (W)	0.005	0.003	0.063	0.016	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	
Antenna Gain (dBi)	2.70	2.70	2.70	2.00	3.30	3.30	2.60	3.30	3.30	2.60	2.00	2.60	2.60	3.30	2.60	2.60	2.00	2.00	
Antenna Gain (Numeric)	1.86	1.86	1.86	1.58	2.14	2.14	1.82	2.14	2.14	1.82	1.58	1.82	1.82	2.14	1.82	1.82	1.58	1.58	
Prediction Distance (cm)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
Time Averaged Duty Cycle (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Calculated Power Density (W/m2)	0.019	0.009	0.234	0.050	1.345	1.345	1.145	1.345	1.345	1.145	0.997	1.145	1.145	1.345	1.145	1.145	0.997	0.997	
Requirement (W/m2)	10.00	10.00	10.00	10.00	10.00	10.00	5.51	10.00	10.00	5.50	10.00	4.67	5.20	10.00	5.43	5.50	10.00	10.00	
MPE ratio (PD/Req.)	0.002	0.001	0.023	0.005	0.135	0.135	0.208	0.135	0.135	0.208	0.100	0.245	0.220	0.135	0.211	0.208	0.100	0.100	
Configuration 1 (MPE Ratio)	0.002	0.001			0.135	0.135	0.208	0.135	0.135	0.208	0.100	0.245	0.220	0.135	0.211	0.208	0.100	0.100	0.247
Configuration 2 (MPE Ratio)			0.158		0.135	0.135	0.208	0.135	0.135	0.208	0.100	0.245	0.220	0.135	0.211	0.208	0.100	0.100	0.403
Configuration 3 (MPE Ratio)				0.005	0.135	0.135	0.208	0.135	0.135	0.208	0.100	0.245	0.220	0.135	0.211	0.208	0.100	0.100	0.250

Requirement: Σ of MPE ratios ≤ 1

The maximum value for WCDMA/LTE and BT/BLE is used in the above calculations.