

## **Collocated MPE Analysis:**

The modem may transmit simultaneously with other collocated radio transmitters within a host device, provided the following conditions are met:

- Each collocated radio transmitter has been certified by FCC for mobile application (that will be met since SQNS module will have its own FCC ID and host device will have its own FCC ID)
- At least 20 cm separation distance between the antennas of the collocated transmitters and the user's body must be maintained at all times (host installation should take care of that)

The output power and antenna gain in a collocated configuration must not exceed the limits and configurations stipulated in the following table 1. The power density calculations for the individual transmitters per wireless technology at an exposure minimum separation distance of 20cm.

## **Exclusion of test condition:**

*Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on calculated or measured field strengths or power density, is  $\leq 1.0$ .*

*MPE ratio1 + MPE ratio2 + MPE ratio3  $\leq 1.0$*

*The spreadsheet as FCC deduces, and releases is employed to conduct the measurement:*

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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Table 1: Collocated MPE Calculation (Worst-case table)

Technology	Frequency (MHz)	Max Conducted Power (dBm)	Max Gain (dBi)	Duty Cycle	FCC Power Density @20cm (mW/cm^2)	FCC MPE Limit (mW/cm^2)
BT	2480	10.4	3.4	0.77	0.004	1.000
GPRS 850	836.6	30.08	5	0.50	0.321	1.000
GPRS 1900	1880	29.01	5	0.50	0.251	1.000

*Scenario 1:*

BT +GPRS 850 +GPRS 1900

BT (mW/cm^2)	FCC MPE Limit (mW/cm^2)	(BT) / MPE Limit	GPRS 850 (mW/cm^2)	FCC MPE Limit (mW/cm^2)	(GPRS 850) / MPE Limit	GPRS 1900 (mW/cm^2)	FCC MPE Limit (mW/cm^2)	(GPRS 1900) / MPE Limit	(BT +GPRS 850+ GPRS 1900)	FCC Limit (mW/cm^2)
0.004	1.000	0.000004	0.321	1.000	0.000321	0.251	1.000	0.000251	0.00576	1.000

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