

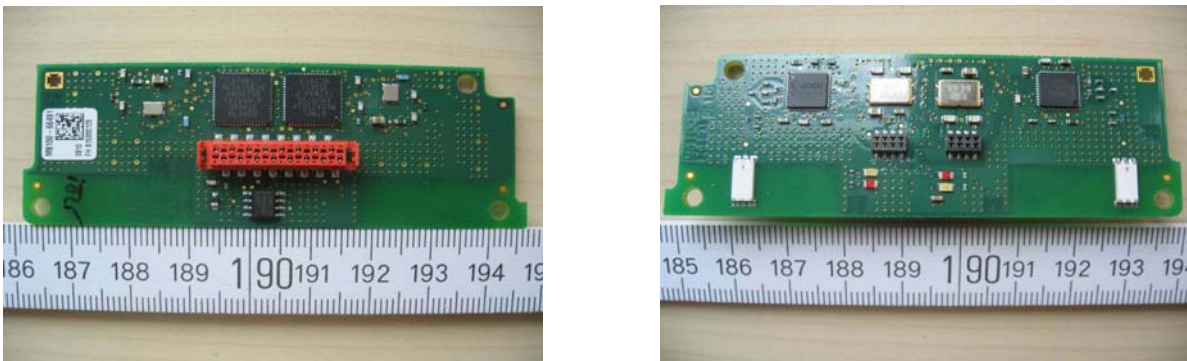
MPE Calculation to allow simultaneously transmission

The following 2 tables will give detailed information about the supported frequency bands and power levels.

First Module:

WLAN Module	Model Name: M3002-66480 WLAN Module	FCC ID: PQC-WLANBV1	IC ID: 3549C-WLANBV1
Frequency Band	Highest measured conducted Power	Highest Antenna Gain	Highest Radiated Power (EIRP)
2412 – 2462 MHz	19.28 dBm / 0.0847 W	3.3 dBi	22.58 dBm / 0.1811 W
5180 – 5240 MHz	12.58 dBm / 0.0181 W	4.34 dBi	16.92 dBm / 0.0492 W
5260 – 5320 MHz	16.87 dBm / 0.0486 W	3.24 dBi	20.11 dBm / 0.1026 W
5735 – 5835 MHz	20.55 dBm / 0.1135 W	4.36 dBi	24.91 dBm / 0.3097 W

Second Module:

SRR Module	Model Name: Short Range Radio Module	FCC ID: PQC-SRRBV1	IC ID: 3549C-SRRBV1
			
Frequency Band	Highest measured conducted Power	Highest Antenna Gain	Highest Radiated Power (EIRP)
2405 – 2480 MHz	0.57 dBm / 0.00114 W	0 dBi	0.57 dBm / 0.00114 W
2405 – 2480 MHz	0.57 dBm / 0.00114 W	0 dBi	0.57 dBm / 0.00114 W

The WLAN Module only can transmit on one frequency band at a given time.

The SRR Module contains two independent transmitters and each one has their own antenna. Therefore the SRR Module can transmit simultaneously.

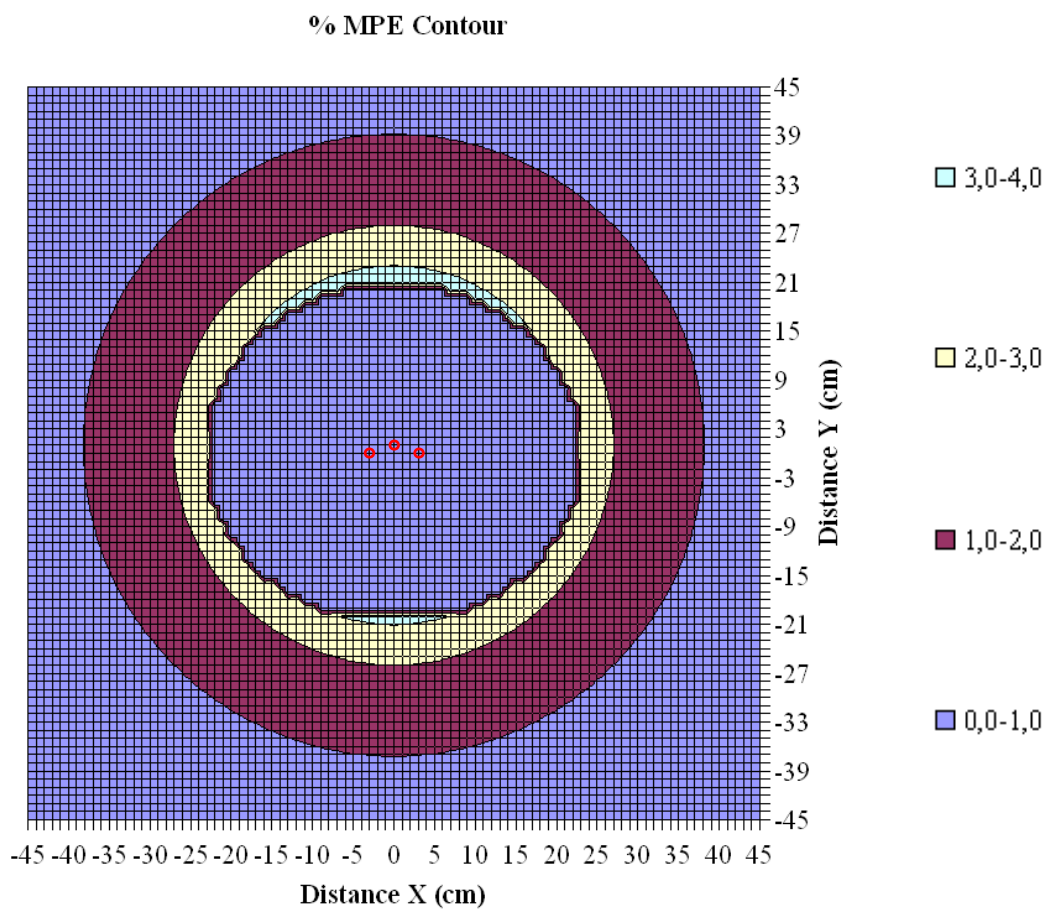
That means that 3 transmitters can transmit simultaneously.

To show compliance with the MPE Limit, each frequency band of the WLAN module will be investigated when transmitting simultaneously with the SRR Module.

The 2 antennas on the SRR Module have a distance of 6 cm.

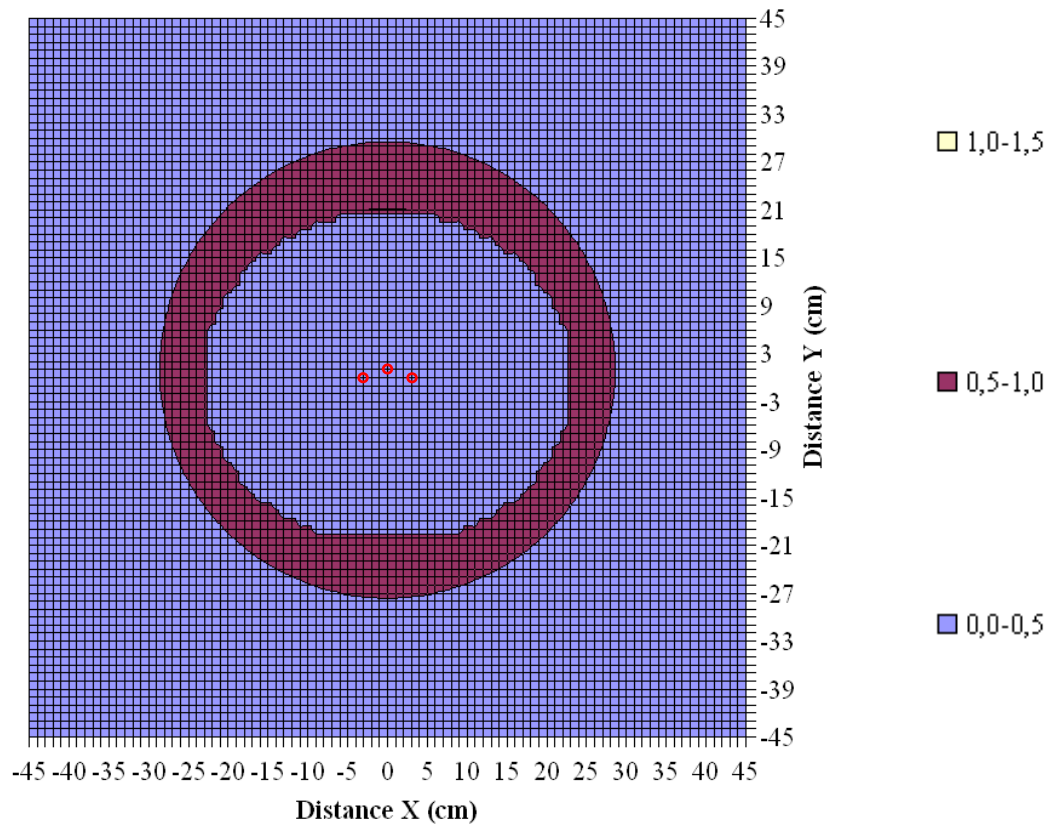
Because the two modules will be used in different host devices, where the modules will have different distances, I will use a distance of 1 cm in the calculation as a worst case example.

WLAN operation at 2.4 GHz:



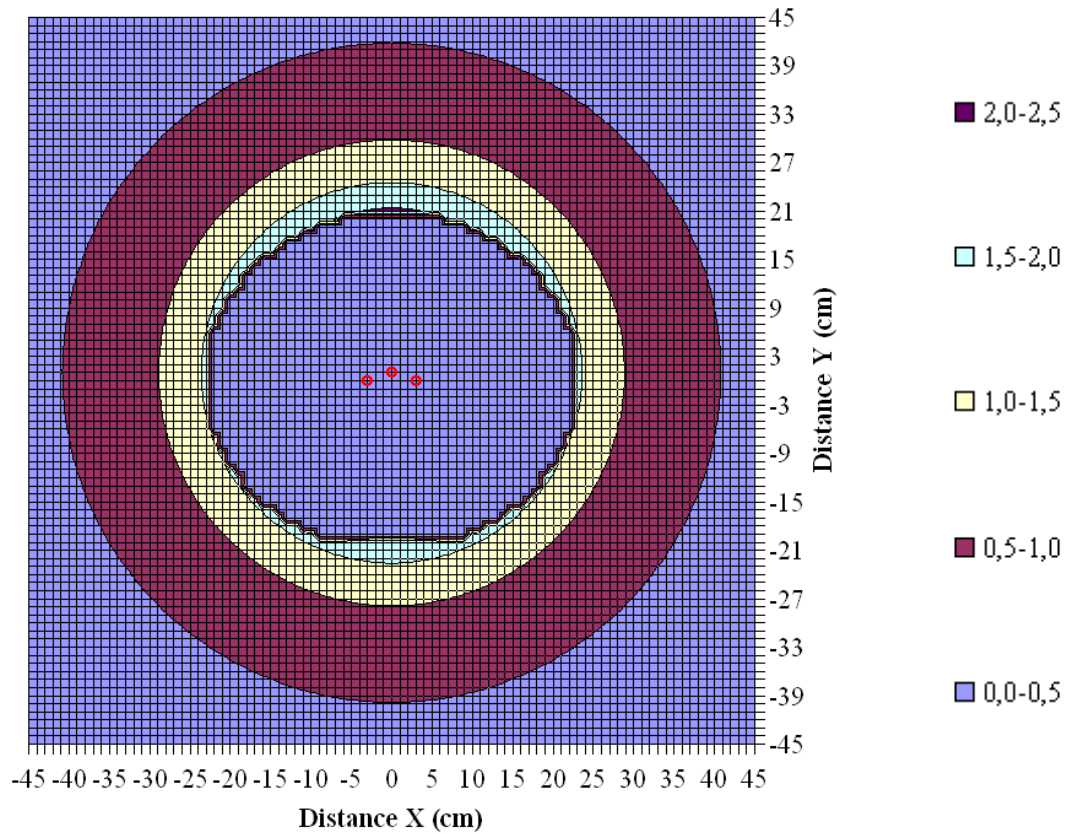
WLAN operation at 5.2 GHz:

% MPE Contour



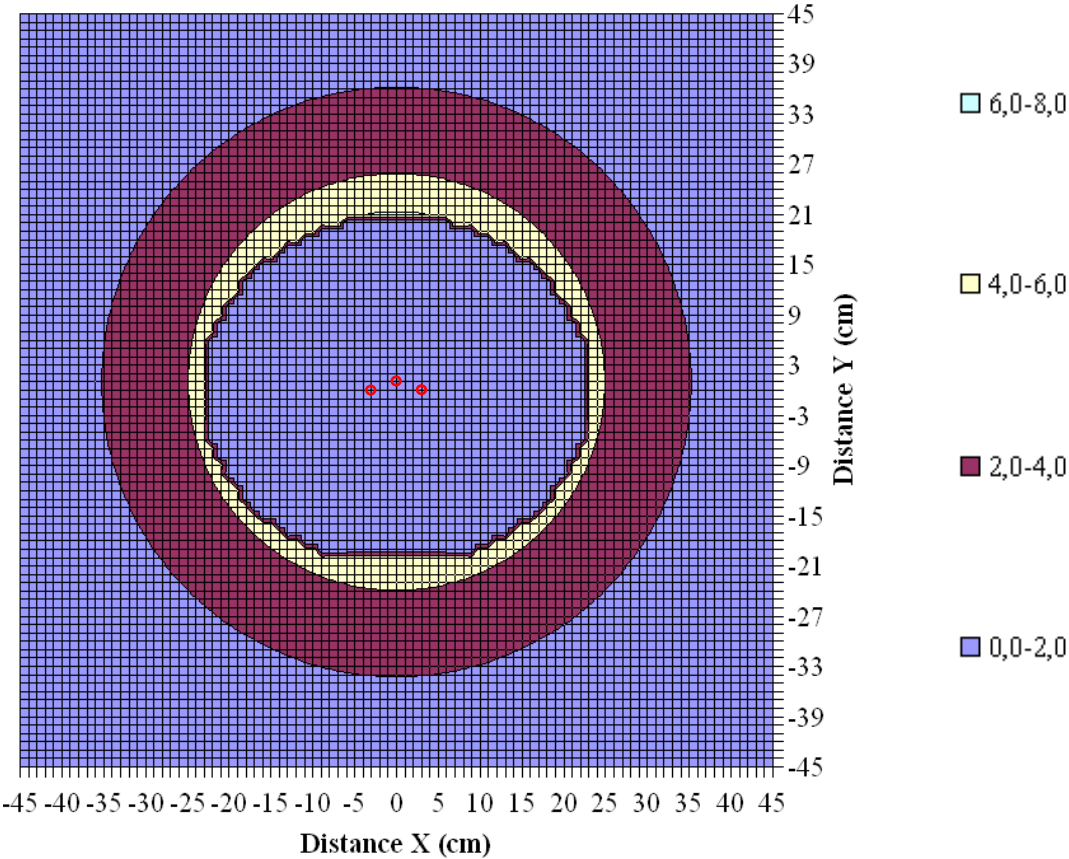
WLAN operation at 5.3 GHz:

% MPE Contour



WLAN operation at 5.8 GHz:

% MPE Contour



Antennas are marked with a red circle. (◦)
As shown in the above diagrams, the MPE value is always far below the limit.
Therefore a co-location of these two modules is permitted.