4.6. MPE calculation

A minimum distance to the user of 20cm is assumed.

Following calculations show assumption with the limits. The maximum tolerance according the manufacturer was assumed to +2dB according the data sheet of the RF-module.

Operation Mode	Frequency on channel (MHz)	Declared maximum conducted output power (dBm)	Antenna Gain Max. (dBi)	Max. positive tolerance according manfacturer (dB)	Declared maximum output power (Measured+ Tune-up) (dBm)	Duty cycle	Declared Maximum conducted output power (W)	Equivalent conducted output power (maximum conducted output power x duty cycle) (mW)
W-LAN 2.4GHz (HT20)	2412,0	15,48	3,00	2,00	20,48	100%	0,112	112
	2437,0	15,10	3,00		20,10		0,102	102
	2462,0	15,02	3,00		20,02		0,100	100
W-LAN 2.4GHz (HT40)	2422,0	15,79	3,00	2,00	20,79	100%	0,120	120
	2437,0	15,84	3,00		20,84		0,121	121
	2452,0	14,58	3,00		19,58		0,091	91

Maximum calculated MPE value:		
MPE-Limit:	1	[mW/cm^2]
Highest MPE value:	0,0241	[mW/cm^2]
Margin to limit	0,9759	[mW/cm^2]

Operation Mode	Frequency on channel (MHz)	Declared maximum conducted output power (dBm)	Max. antenna gain: (dBi)	Max. positive tolerance according manfacturer (dB)	Declared maximum output power (Measured+ Tune-up) (dBm)	Duty cycle	Declared Maximum conducted output power (W)	Equivalent conducted output power (maximum conducted output power x duty cycle) (mW)
W-LAN 5725-5750MHz (20MHz BW)	5745,0	19,21	5,0	2,00	26,21	100%	0,418	418
	5785,0	18,89			25,89		0,388	388
	5825,0	18,34			25,34		0,342	342
W-LAN 5725-5750MHz (40MHz BW)	5755,0	19,76	5,0	2,00	26,76	100%	0,474	474
	5815,0	19,66			26,66		0,463	463

Maximum calculated MPE value:		
MPE-Limit:	1	[mW/cm^2]
Highest MPE value:	0,0944	[mW/cm^2]
Margin to limit	0,9056	[mW/cm^2]