

Transmitters technical information

	Transmitter 1 (EUT)	Transmitter 3 (2.4 GHz)	Transmitter 3 (Medical)	Transmitter 4 (BLE)
Prediction frequency	2412 MHz	2450 MHz	403 MHz	2.450 MHz
Antenna gain	3.0 dBi	0 dBi	0 dBi	-7.9 dBi
Maximum transmitter conducted power	21.21 dBm	15.8 dBm	-23.4 dBm	4.4 dBm
Prediction distance (declared)	20 cm	20 cm	20 cm	20 cm
FCC ID:	2AYAJ-WF1	2AYAJ-BS1	2AYAJ-BS1	R7T1201102

MPE calculation

	Transmitter 1	Transmitter 2	Transmitter 3	Transmitter 4
Fundamental transmit (prediction) frequency:	2412 MHz	2450 MHz	403 MHz	2450 MHz
Maximum measured conducted peak output power:	21.21 dBm	15.8 dBm	-23.4 dBm	4.4 dBm
Cable and/or jumper loss:	0 dB	1 dB	0 dB	0 dB
Maximum peak power at antenna input terminal:	21.21 dBm	14.8 dBm	-23.4 dBm	4.4 dBm
Duty cycle:	100 %	100 %	100 %	100 %
Maximum calculated average power at antenna input terminal:	132.12956 mW	30.199517 mW	0.0045709 mW	2.754228703 mW
Single Antenna gain (typical):	3 dBi	0 dBi	0 dBi	-7.9 dBi
Number of antennae:	1	1	1	1
Total system gain:	3.00 dBi	0.00 dBi	0.00 dBi	-7.90 dBi
MPE limit for uncontrolled exposure at prediction frequency:	0.53660 mW/cm ²	1.00000 mW/cm ²	0.54236 mW/cm ²	1.00000 mW/cm ²
MPE limit for controlled exposure at prediction frequency:	5.366018 W/m ²	10.00000 W/m ²	5.423649 W/m ²	10.00000 W/m ²
Minimum calculated prediction distance for compliance:	31.70187 W/m ²	50.00000 W/m ²	31.95062 W/m ²	50.00000 W/m ²
Typical (declared) distance:	20 cm	20 cm	20 cm	20 cm
Average power density at prediction frequency:	0.052448 mW/cm ²	0.052448 mW/cm ²	0.006008 mW/cm ²	0.000001 mW/cm ²
MPE compliance for simultaneous operation:	0.524481 W/m ²	0.524481 W/m ²	0.060080 W/m ²	0.000009 W/m ²
Margin of Compliance for controlled environment:	17.81 dB	19.79 dB	27.26 dB	45.56 dB
Margin of Compliance for uncontrolled environment:	10.10 dB	12.80 dB	19.56 dB	37.86 dB
Average power density to MPE limit ratio (uncontrolled):	0.098	0.052	0.011	0.000
Average power density to MPE limit ratio (controlled):	0.017	0.010	0.002	0.000
Total sum of ratios for FCC (uncontrolled):	0.059 <1	0.059 <1	0.012 <1	0.5855 W/m ²
Total sum of ratios for FCC (controlled):	0.109 <1	0.109 <1	0.018 <1	
Maximum allowed sum of ratios:	1	1	1	

1.1.1 Verdict

The calculation is below the limit; therefore, the product is passing the RF Exposure requirements for the declared distance.