

RF Exposure

Reference: CFR 47 FCC Part 1.1310
RSS-102. Issue 5

Description: All 3 transmitters in the device have the possibility of transmitting simultaneously. The worst-case exposure for each transmitter was used to calculate the percentage of the allowable limit that each transmitter contributed. All of the percentages were then added together to verify that at the specified operating distance, they were below the allowable limit.

All measurements were peak or RMS power readings taken from test reports from accredited test labs. Antenna gains were taken from the manufacturer’s specifications.

Limits: Maximum exposure limits from CFR 47, FCC Part 1.1310:

Table 1 - Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

RF Exposure

Occupational/Controlled	0
General Population/uncontrolled	1

Transmitter	Frequency	Antenna Gain	Power	Power Density	Limit	% of limit	Highest	Total	Type
	MHz	numerical	mW	mW/cm ²	mW/cm ²	Percent of limit			
1	908.4	1	0.344	0.00007	0.6056	0.0001	1	0.01%	AV/Conducted
1	916	1	0.291	0.00006	0.6107	0.0001		0.00%	AV/Conducted
2	905.6	1	6.78	0.00135	0.6037	0.0022	1	0.22%	PK/EIRP
2	915	1	4.79	0.00095	0.6100	0.0016		0.00%	PK/EIRP
2	924.4	1	3.39	0.00067	0.6163	0.0011		0.00%	PK/EIRP
3*	2412	1	167.11	0.03326	1.0000	3.33%		0.00%	PK/conducted
3*	2442	1	236.05	0.04698	1.0000	4.70%	1	4.70%	PK/conducted
3*	2462	1	221.31	0.04405	1.0000	4.41%		0.00%	PK/conducted
TOTAL								4.93%	

Distance	20	cm
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PASS?	YES
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*Note: module 3 comes from test report D50429R2 from Compatible electronics as listed under FCC ID 2ADHKATWINC150