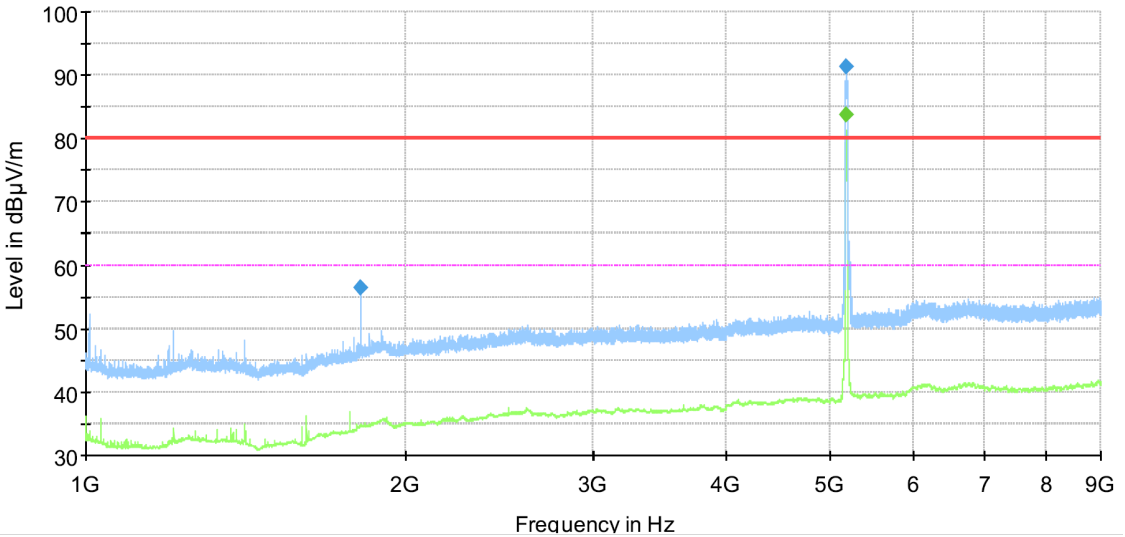
Calculate device radiated power from EMC test data

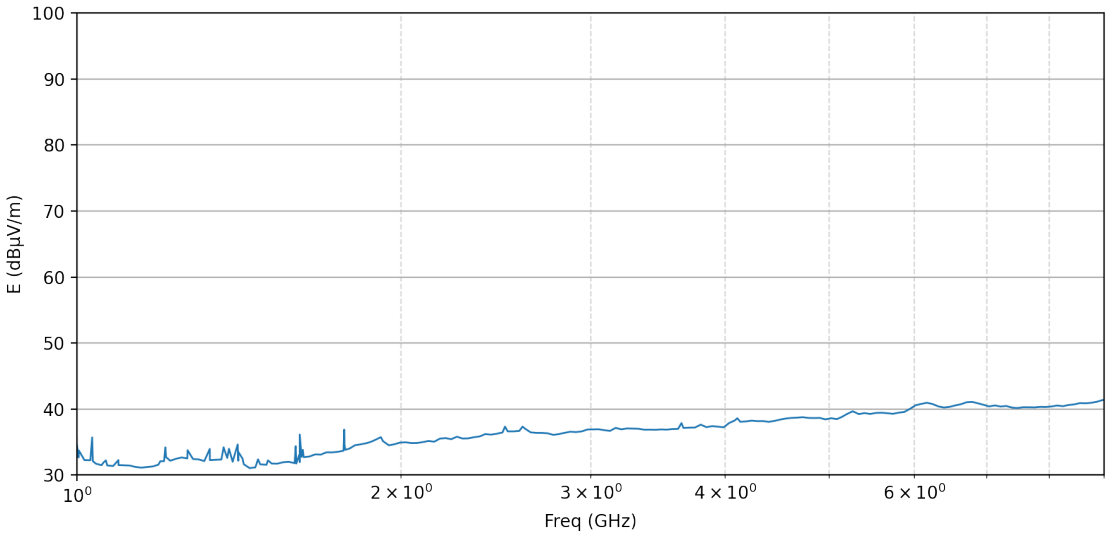
Prepared by: Dr Vitas Anderson (Two Fields Consulting)
Date: 16 June 2022

FCC ID: 2AVNR-AC13 (Configuration 1, Figure/Page 3, Class A device)
Frequency span: 1 GHz to 9 GHz
RBW: 0.001 GHz, distance: 3 m
Peak-to-average correction: N/A
No. of sample points: 8,000
Cumulative S level: 1.617E-07 W/m²
Device radiated power: 0.0111 mW

EMC test spectral plot



Plot of extracted data from EMC test spectral plot



Calculate device radiated power from EMC test data

Table of extracted data from EMC test spectral plot

Freq (GHz)	E (dBµV/m)	E (V/m rms)	S (W/m²)
0.997	32.39	3.239E+01	4.599E-12
0.999	35.72	3.572E+01	9.907E-12
0.999	34.84	3.484E+01	8.079E-12
1.003	32.67	3.267E+01	4.900E-12
1.004	33.71	3.371E+01	6.225E-12
1.016	32.26	3.226E+01	4.468E-12
1.029	32.24	3.224E+01	4.445E-12
1.033	35.71	3.571E+01	9.877E-12
1.034	32.10	3.210E+01	4.306E-12
1.041	31.72	3.172E+01	3.938E-12
1.054	31.50	3.150E+01	3.745E-12
1.058	31.90	3.190E+01	4.107E-12
1.063	32.23	3.223E+01	4.429E-12
1.066	31.45	3.145E+01	3.708E-12
1.08	31.37	3.137E+01	3.635E-12
1.092	32.27	3.227E+01	4.471E-12
1.092	31.51	3.151E+01	3.753E-12
1.106	31.47	3.147E+01	3.719E-12
1.119	31.44	3.144E+01	3.692E-12
1.133	31.23	3.123E+01	3.519E-12
1.147	31.12	3.112E+01	3.431E-12
1.161	31.21	3.121E+01	3.506E-12
1.176	31.31	3.131E+01	3.587E-12
1.19	31.56	3.156E+01	3.800E-12
1.195	32.10	3.210E+01	4.305E-12
1.204	32.09	3.209E+01	4.296E-12
1.208	34.20	3.420E+01	6.970E-12
1.209	32.70	3.270E+01	4.944E-12
1.22	32.17	3.217E+01	4.370E-12
1.235	32.46	3.246E+01	4.678E-12
1.25	32.66	3.266E+01	4.894E-12
1.266	32.52	3.252E+01	4.737E-12
1.266	33.77	3.377E+01	6.313E-12
1.281	32.44	3.244E+01	4.648E-12
1.297	32.37	3.237E+01	4.579E-12
1.313	32.11	3.211E+01	4.315E-12
1.328	33.96	3.396E+01	6.606E-12
1.328	32.26	3.226E+01	4.458E-12
1.345	32.32	3.232E+01	4.521E-12
1.361	32.36	3.236E+01	4.564E-12
1.368	34.21	3.421E+01	6.994E-12
1.373	33.46	3.346E+01	5.882E-12
1.379	32.59	3.259E+01	4.815E-12
1.384	33.99	3.399E+01	6.641E-12
1.395	32.02	3.202E+01	4.224E-12
1.41	34.64	3.464E+01	7.721E-12

1.412	32.17	3.217E+01	4.367E-12
1.412	33.52	3.352E+01	5.963E-12
1.425	32.47	3.247E+01	4.686E-12
1.428	31.63	3.163E+01	3.860E-12
1.446	31.05	3.105E+01	3.380E-12
1.464	31.16	3.116E+01	3.466E-12
1.472	32.39	3.239E+01	4.599E-12
1.479	31.63	3.163E+01	3.859E-12
1.499	31.55	3.155E+01	3.793E-12
1.504	32.23	3.223E+01	4.429E-12
1.516	31.74	3.174E+01	3.961E-12
1.535	31.73	3.173E+01	3.946E-12
1.553	31.94	3.194E+01	4.145E-12
1.572	32.01	3.201E+01	4.213E-12
1.593	31.80	3.180E+01	4.018E-12
1.596	34.37	3.437E+01	7.263E-12
1.598	31.74	3.174E+01	3.955E-12
1.608	33.06	3.306E+01	5.367E-12
1.61	31.95	3.195E+01	4.154E-12
1.61	36.15	3.615E+01	1.093E-11
1.616	32.75	3.275E+01	5.002E-12
1.621	33.82	3.382E+01	6.396E-12
1.623	32.71	3.271E+01	4.952E-12
1.644	32.81	3.281E+01	5.070E-12
1.664	33.13	3.313E+01	5.454E-12
1.684	33.10	3.310E+01	5.413E-12
1.705	33.45	3.345E+01	5.868E-12
1.726	33.44	3.344E+01	5.853E-12
1.747	33.52	3.352E+01	5.964E-12
1.768	33.69	3.369E+01	6.202E-12
1.771	36.89	3.689E+01	1.296E-11
1.772	35.58	3.558E+01	9.576E-12
1.772	34.69	3.469E+01	7.809E-12
1.775	33.82	3.382E+01	6.396E-12
1.791	34.02	3.402E+01	6.695E-12
1.811	34.51	3.451E+01	7.501E-12
1.834	34.65	3.465E+01	7.741E-12
1.856	34.82	3.482E+01	8.039E-12
1.879	35.09	3.509E+01	8.561E-12
1.901	35.49	3.549E+01	9.397E-12
1.915	35.75	3.575E+01	9.959E-12
1.924	35.15	3.515E+01	8.683E-12
1.948	34.50	3.450E+01	7.482E-12
1.972	34.67	3.467E+01	7.780E-12
1.996	34.92	3.492E+01	8.244E-12
2.02	34.96	3.496E+01	8.317E-12
2.045	34.84	3.484E+01	8.089E-12
2.069	34.86	3.486E+01	8.121E-12
2.095	35.00	3.500E+01	8.380E-12

2.121	35.16	3.516E+01	8.702E-12
2.147	35.05	3.505E+01	8.486E-12
2.173	35.52	3.552E+01	9.456E-12
2.199	35.60	3.560E+01	9.625E-12
2.226	35.43	3.543E+01	9.268E-12
2.253	35.81	3.581E+01	1.011E-11
2.281	35.53	3.553E+01	9.480E-12
2.309	35.56	3.556E+01	9.540E-12
2.337	35.73	3.573E+01	9.932E-12
2.366	35.85	3.585E+01	1.020E-11
2.394	36.20	3.620E+01	1.107E-11
2.424	36.12	3.612E+01	1.086E-11
2.453	36.25	3.625E+01	1.119E-11
2.485	36.45	3.645E+01	1.172E-11
2.498	37.34	3.734E+01	1.438E-11
2.512	36.62	3.662E+01	1.218E-11
2.544	36.61	3.661E+01	1.216E-11
2.575	36.69	3.669E+01	1.237E-11
2.593	37.34	3.734E+01	1.438E-11
2.607	37.04	3.704E+01	1.340E-11
2.638	36.47	3.647E+01	1.177E-11
2.671	36.39	3.639E+01	1.155E-11
2.703	36.38	3.638E+01	1.154E-11
2.736	36.32	3.632E+01	1.138E-11
2.77	36.09	3.609E+01	1.078E-11
2.803	36.20	3.620E+01	1.107E-11
2.838	36.40	3.640E+01	1.158E-11
2.872	36.57	3.657E+01	1.203E-11
2.907	36.51	3.651E+01	1.188E-11
2.943	36.61	3.661E+01	1.215E-11
2.979	36.90	3.690E+01	1.299E-11
3.015	36.92	3.692E+01	1.304E-11
3.052	36.93	3.693E+01	1.309E-11
3.089	36.80	3.680E+01	1.270E-11
3.127	36.69	3.669E+01	1.238E-11
3.165	37.15	3.715E+01	1.376E-11
3.204	36.92	3.692E+01	1.305E-11
3.243	37.06	3.706E+01	1.349E-11
3.282	37.04	3.704E+01	1.340E-11
3.322	37.01	3.701E+01	1.334E-11
3.363	36.87	3.687E+01	1.291E-11
3.404	36.88	3.688E+01	1.292E-11
3.446	36.86	3.686E+01	1.286E-11
3.488	36.91	3.691E+01	1.302E-11
3.53	36.88	3.688E+01	1.292E-11
3.573	36.96	3.696E+01	1.319E-11
3.617	36.99	3.699E+01	1.327E-11
3.644	37.87	3.787E+01	1.626E-11
3.659	37.14	3.714E+01	1.373E-11

3.706	37.18	3.718E+01	1.387E-11
3.751	37.20	3.720E+01	1.392E-11
3.797	37.64	3.764E+01	1.541E-11
3.843	37.25	3.725E+01	1.410E-11
3.89	37.41	3.741E+01	1.460E-11
3.937	37.34	3.734E+01	1.436E-11
3.988	37.23	3.723E+01	1.402E-11
4.034	37.88	3.788E+01	1.627E-11
4.083	38.27	3.827E+01	1.779E-11
4.106	38.61	3.861E+01	1.926E-11
4.133	38.06	3.806E+01	1.698E-11
4.184	38.13	3.813E+01	1.724E-11
4.235	38.24	3.824E+01	1.770E-11
4.286	38.17	3.817E+01	1.740E-11
4.339	38.18	3.818E+01	1.744E-11
4.392	38.06	3.806E+01	1.696E-11
4.445	38.21	3.821E+01	1.755E-11
4.5	38.40	3.840E+01	1.834E-11
4.554	38.57	3.857E+01	1.907E-11
4.61	38.65	3.865E+01	1.946E-11
4.666	38.70	3.870E+01	1.966E-11
4.723	38.76	3.876E+01	1.993E-11
4.781	38.65	3.865E+01	1.946E-11
4.839	38.64	3.864E+01	1.938E-11
4.898	38.66	3.866E+01	1.948E-11
4.958	38.43	3.843E+01	1.848E-11
5.019	38.62	3.862E+01	1.929E-11
5.08	38.47	3.847E+01	1.867E-11
5.132	38.78	3.878E+01	2.003E-11
5.196	39.28	3.928E+01	2.246E-11
5.257	39.66	3.966E+01	2.453E-11
5.325	39.23	3.923E+01	2.224E-11
5.39	39.39	3.939E+01	2.306E-11
5.456	39.26	3.926E+01	2.238E-11
5.523	39.41	3.941E+01	2.315E-11
5.59	39.44	3.944E+01	2.330E-11
5.658	39.37	3.937E+01	2.295E-11
5.727	39.28	3.928E+01	2.249E-11
5.797	39.44	3.944E+01	2.333E-11
5.868	39.55	3.955E+01	2.392E-11
5.94	40.02	4.002E+01	2.666E-11
6.012	40.57	4.057E+01	3.024E-11
6.086	40.78	4.078E+01	3.172E-11
6.16	40.95	4.095E+01	3.302E-11
6.235	40.76	4.076E+01	3.160E-11
6.311	40.41	4.041E+01	2.915E-11
6.388	40.23	4.023E+01	2.796E-11
6.466	40.33	4.033E+01	2.863E-11
6.545	40.55	4.055E+01	3.008E-11

6.625	40.73	4.073E+01	3.136E-11
6.706	41.03	4.103E+01	3.361E-11
6.788	41.08	4.108E+01	3.403E-11
6.87	40.87	4.087E+01	3.240E-11
6.958	40.63	4.063E+01	3.065E-11
7.035	40.40	4.040E+01	2.908E-11
7.125	40.55	4.055E+01	3.008E-11
7.212	40.38	4.038E+01	2.897E-11
7.3	40.46	4.046E+01	2.952E-11
7.393	40.21	4.021E+01	2.785E-11
7.475	40.15	4.015E+01	2.748E-11
7.571	40.27	4.027E+01	2.825E-11
7.663	40.27	4.027E+01	2.821E-11
7.757	40.25	4.025E+01	2.811E-11
7.851	40.33	4.033E+01	2.864E-11
7.947	40.32	4.032E+01	2.853E-11
8.04	40.39	4.039E+01	2.901E-11
8.142	40.54	4.054E+01	3.001E-11
8.242	40.43	4.043E+01	2.928E-11
8.342	40.61	4.061E+01	3.054E-11
8.444	40.71	4.071E+01	3.120E-11
8.547	40.90	4.090E+01	3.265E-11
8.652	40.87	4.087E+01	3.240E-11
8.757	40.95	4.095E+01	3.298E-11
8.864	41.11	4.111E+01	3.425E-11
8.972	41.36	4.136E+01	3.629E-11