Calculate device radiated power from EMC test data

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FCC ID: 2AFYJ-OASLV204 (Configuration 3, Figure 43a, Class A device)
Frequency span: 1,000 MHz to 3,000 MHz
RBW: 1.0 MHz, distance: 3 m
Peak-to-average correction: -0.00 dB
No. of sample points: 2,000
Cumulative S level: 1.502E-07 W/m²
Device radiated power: 0.0104 mW

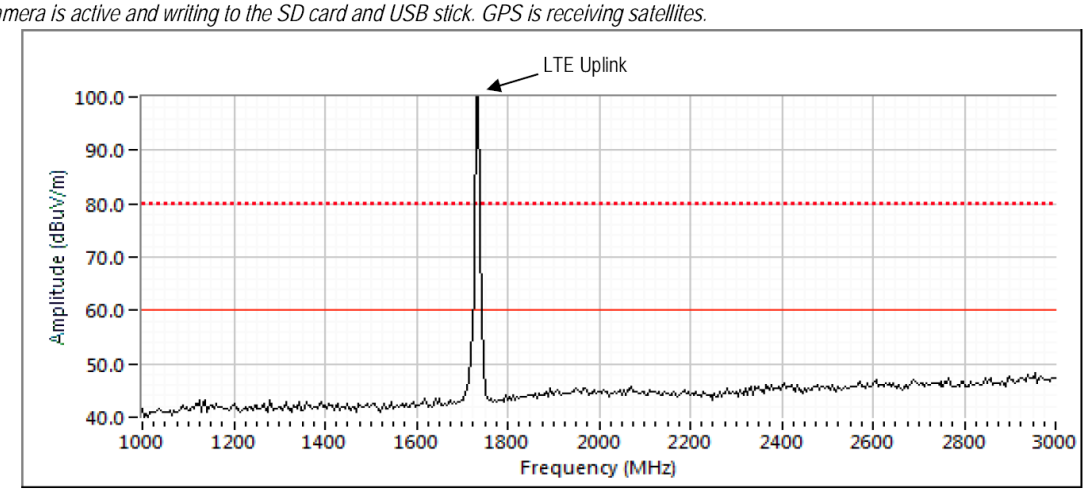
EMC test spectral plot

Run #3: Maximized Readings, 1000 - 40000 MHz

Test Parameters for Preliminary Scan(s)			
Frequency Range (MHz)	Prescan Distance (meters)	Limit Distance (meters)	Extrapolation Factor (dB, applied to data)
1000 - 40000	3	3	0.0

EUT and Test Configuration Details

LTE modem (R202) is transmitting at 1732.5 MHz (Ch# 20175) with max power, 802.11n20 Ch#100 transmitting with max RF power, Camera is active and writing to the SD card and USB stick. GPS is receiving satellites.



Plot of extracted data from EMC test spectral plot

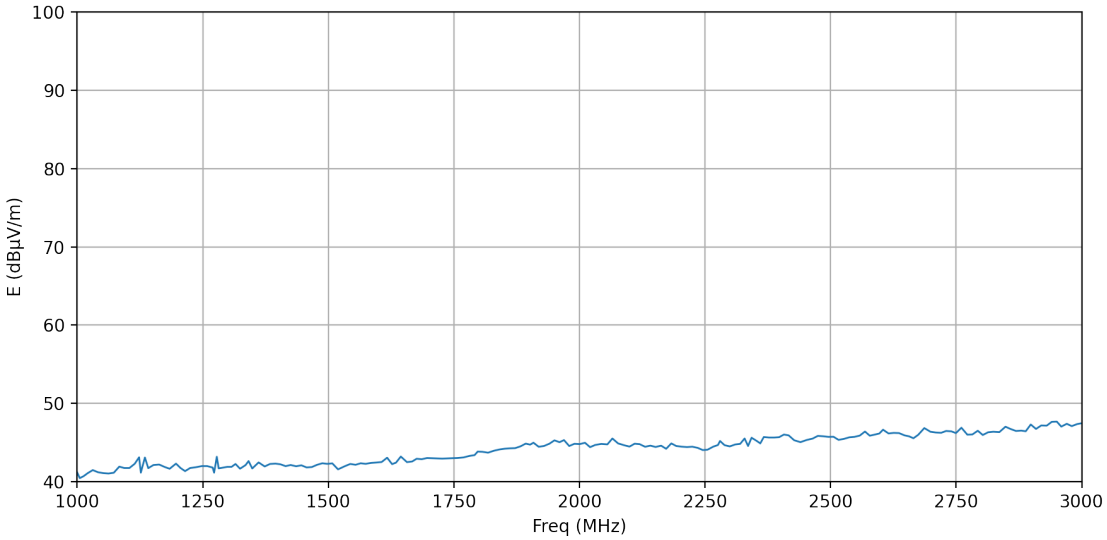


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Table of extracted data from EMC test spectral plot

Freq (MHz)	E (dBµV/m)	E (V/m rms)	S (W/m²)
998	41.44	4.144E+01	3.694E-11
1005	40.44	4.044E+01	2.935E-11
1013	40.70	4.070E+01	3.116E-11
1021	41.07	4.107E+01	3.393E-11
1031	41.47	4.147E+01	3.720E-11
1042	41.19	4.119E+01	3.490E-11
1052	41.08	4.108E+01	3.402E-11
1062	41.03	4.103E+01	3.364E-11
1073	41.13	4.113E+01	3.441E-11
1084	41.91	4.191E+01	4.120E-11
1094	41.73	4.173E+01	3.955E-11
1104	41.73	4.173E+01	3.955E-11
1115	42.28	4.228E+01	4.481E-11
1123	43.11	4.311E+01	5.424E-11
1127	41.14	4.114E+01	3.451E-11
1135	43.08	4.308E+01	5.388E-11
1141	41.72	4.172E+01	3.938E-11
1152	42.12	4.212E+01	4.321E-11
1163	42.18	4.218E+01	4.380E-11
1174	41.88	4.188E+01	4.092E-11
1184	41.64	4.164E+01	3.866E-11
1197	42.30	4.230E+01	4.501E-11
1206	41.73	4.173E+01	3.955E-11
1215	41.34	4.134E+01	3.607E-11
1225	41.73	4.173E+01	3.955E-11
1236	41.83	4.183E+01	4.046E-11
1248	41.98	4.198E+01	4.186E-11
1259	41.98	4.198E+01	4.186E-11
1270	41.79	4.179E+01	4.009E-11
1273	41.14	4.114E+01	3.451E-11
1278	43.17	4.317E+01	5.510E-11
1282	41.69	4.169E+01	3.910E-11
1299	41.88	4.188E+01	4.092E-11
1307	41.88	4.188E+01	4.092E-11
1315	42.25	4.225E+01	4.455E-11
1324	41.65	4.165E+01	3.875E-11
1335	42.10	4.210E+01	4.306E-11
1341	42.62	4.262E+01	4.851E-11
1349	41.68	4.168E+01	3.901E-11
1361	42.45	4.245E+01	4.662E-11
1373	41.93	4.193E+01	4.138E-11
1384	42.25	4.225E+01	4.455E-11
1395	42.30	4.230E+01	4.501E-11
1405	42.21	4.221E+01	4.410E-11
1415	41.97	4.197E+01	4.176E-11
1425	42.12	4.212E+01	4.321E-11

1436	41.96	4.196E+01	4.162E-11
1446	42.08	4.208E+01	4.282E-11
1457	41.81	4.181E+01	4.023E-11
1467	41.86	4.186E+01	4.069E-11
1478	42.15	4.215E+01	4.350E-11
1488	42.34	4.234E+01	4.545E-11
1498	42.27	4.227E+01	4.471E-11
1508	42.33	4.233E+01	4.532E-11
1519	41.56	4.156E+01	3.801E-11
1532	41.94	4.194E+01	4.148E-11
1544	42.25	4.225E+01	4.455E-11
1554	42.15	4.215E+01	4.350E-11
1564	42.34	4.234E+01	4.545E-11
1574	42.27	4.227E+01	4.471E-11
1585	42.39	4.239E+01	4.597E-11
1596	42.44	4.244E+01	4.649E-11
1606	42.50	4.250E+01	4.716E-11
1617	43.05	4.305E+01	5.355E-11
1627	42.23	4.223E+01	4.430E-11
1635	42.42	4.242E+01	4.636E-11
1644	43.20	4.320E+01	5.544E-11
1656	42.49	4.249E+01	4.702E-11
1667	42.57	4.257E+01	4.790E-11
1676	42.92	4.292E+01	5.193E-11
1686	42.86	4.286E+01	5.123E-11
1696	43.01	4.301E+01	5.305E-11
1727	42.93	4.293E+01	5.213E-11
1757	43.02	4.302E+01	5.312E-11
1769	43.09	4.309E+01	5.404E-11
1782	43.29	4.329E+01	5.655E-11
1791	43.38	4.338E+01	5.777E-11
1797	43.84	4.384E+01	6.415E-11
1807	43.81	4.381E+01	6.371E-11
1818	43.69	4.369E+01	6.210E-11
1830	43.95	4.395E+01	6.592E-11
1841	44.10	4.410E+01	6.820E-11
1851	44.20	4.420E+01	6.977E-11
1861	44.25	4.425E+01	7.056E-11
1872	44.27	4.427E+01	7.097E-11
1882	44.50	4.450E+01	7.469E-11
1893	44.85	4.485E+01	8.109E-11
1902	44.72	4.472E+01	7.860E-11
1908	44.97	4.497E+01	8.331E-11
1919	44.45	4.445E+01	7.384E-11
1929	44.55	4.455E+01	7.554E-11
1940	44.84	4.484E+01	8.086E-11
1950	45.27	4.527E+01	8.926E-11
1960	45.03	4.503E+01	8.453E-11
1969	45.30	4.530E+01	8.995E-11

1980	44.55	4.455E+01	7.554E-11
1990	44.83	4.483E+01	8.063E-11
2000	44.79	4.479E+01	7.995E-11
2011	44.96	4.496E+01	8.310E-11
2021	44.40	4.440E+01	7.301E-11
2031	44.68	4.468E+01	7.789E-11
2043	44.81	4.481E+01	8.032E-11
2055	44.75	4.475E+01	7.923E-11
2066	45.51	4.551E+01	9.426E-11
2077	44.88	4.488E+01	8.156E-11
2089	44.64	4.464E+01	7.727E-11
2100	44.47	4.447E+01	7.426E-11
2110	44.84	4.484E+01	8.086E-11
2120	44.78	4.478E+01	7.977E-11
2131	44.45	4.445E+01	7.384E-11
2141	44.59	4.459E+01	7.640E-11
2152	44.42	4.442E+01	7.343E-11
2162	44.59	4.459E+01	7.631E-11
2173	44.19	4.419E+01	6.961E-11
2183	44.88	4.488E+01	8.156E-11
2193	44.55	4.455E+01	7.554E-11
2204	44.46	4.446E+01	7.405E-11
2214	44.41	4.441E+01	7.322E-11
2225	44.46	4.446E+01	7.401E-11
2235	44.31	4.431E+01	7.153E-11
2245	44.03	4.403E+01	6.705E-11
2255	44.07	4.407E+01	6.774E-11
2266	44.46	4.446E+01	7.405E-11
2276	44.67	4.467E+01	7.782E-11
2280	45.19	4.519E+01	8.755E-11
2289	44.66	4.466E+01	7.749E-11
2299	44.50	4.450E+01	7.469E-11
2310	44.74	4.474E+01	7.896E-11
2320	44.82	4.482E+01	8.047E-11
2329	45.51	4.551E+01	9.426E-11
2336	44.55	4.455E+01	7.554E-11
2343	45.61	4.561E+01	9.642E-11
2353	45.19	4.519E+01	8.755E-11
2360	44.88	4.488E+01	8.156E-11
2367	45.69	4.569E+01	9.836E-11
2377	45.63	4.563E+01	9.697E-11
2388	45.63	4.563E+01	9.697E-11
2397	45.67	4.567E+01	9.786E-11
2407	46.01	4.601E+01	1.058E-10
2416	45.91	4.591E+01	1.033E-10
2427	45.28	4.528E+01	8.956E-11
2440	45.04	4.504E+01	8.462E-11
2452	45.31	4.531E+01	9.007E-11
2464	45.49	4.549E+01	9.399E-11

2475	45.84	4.584E+01	1.018E-10
2486	45.79	4.579E+01	1.006E-10
2496	45.71	4.571E+01	9.886E-11
2506	45.73	4.573E+01	9.920E-11
2516	45.33	4.533E+01	9.048E-11
2526	45.45	4.545E+01	9.298E-11
2537	45.65	4.565E+01	9.752E-11
2548	45.72	4.572E+01	9.892E-11
2558	45.88	4.588E+01	1.026E-10
2568	46.39	4.639E+01	1.156E-10
2578	45.86	4.586E+01	1.023E-10
2589	46.02	4.602E+01	1.062E-10
2597	46.15	4.615E+01	1.093E-10
2604	46.63	4.663E+01	1.221E-10
2615	46.15	4.615E+01	1.093E-10
2626	46.22	4.622E+01	1.111E-10
2636	46.20	4.620E+01	1.105E-10
2647	45.91	4.591E+01	1.033E-10
2656	45.78	4.578E+01	1.005E-10
2665	45.54	4.554E+01	9.490E-11
2674	45.98	4.598E+01	1.050E-10
2687	46.84	4.684E+01	1.281E-10
2699	46.37	4.637E+01	1.150E-10
2709	46.27	4.627E+01	1.124E-10
2720	46.23	4.623E+01	1.114E-10
2730	46.47	4.647E+01	1.176E-10
2740	46.42	4.642E+01	1.163E-10
2749	46.19	4.619E+01	1.104E-10
2760	46.88	4.688E+01	1.294E-10
2772	45.99	4.599E+01	1.055E-10
2782	46.02	4.602E+01	1.062E-10
2793	46.50	4.650E+01	1.184E-10
2803	45.95	4.595E+01	1.044E-10
2813	46.30	4.630E+01	1.130E-10
2824	46.37	4.637E+01	1.150E-10
2836	46.32	4.632E+01	1.137E-10
2848	47.01	4.701E+01	1.333E-10
2859	46.71	4.671E+01	1.245E-10
2869	46.47	4.647E+01	1.176E-10
2880	46.51	4.651E+01	1.188E-10
2888	46.43	4.643E+01	1.166E-10
2898	47.29	4.729E+01	1.423E-10
2909	46.73	4.673E+01	1.248E-10
2919	47.17	4.717E+01	1.383E-10
2930	47.15	4.715E+01	1.376E-10
2940	47.64	4.764E+01	1.539E-10
2950	47.66	4.766E+01	1.549E-10
2959	47.02	4.702E+01	1.336E-10
2970	47.39	4.739E+01	1.453E-10

2980	47.08	4.708E+01	1.356E-10
2991	47.34	4.734E+01	1.439E-10
2997	47.43	4.743E+01	1.468E-10