

Antenna Test Lab Co. Summary

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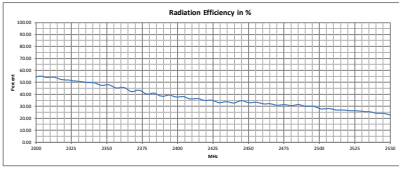
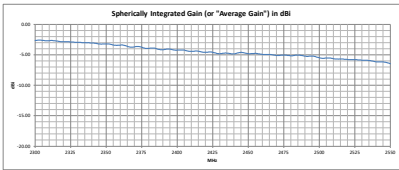
Test Date	Tuesday, February 7, 2023
Tested By:	Glenn Robb (919) 200-0292 Info@AntennaTestLab.com
Sample Description	Inverted F antenna trace onboard 3M Scott P/N 200457

Axis	Antenna Under Test Orientation Notes (See Coordinate Diagram Tab And Separate Setup Photos)
+Z Axis is Theta= 0 & Phi=any	
-Z Axis is Theta= 180 & Phi=any	Axis of feed line
+X axis is Theta=90 & Phi=0	
-X axis is Theta=90 & Phi=180	
+Y axis is Theta=90 & Phi=90	
-Y axis is Theta=90 & Phi=270	

Other Coordinate Notes, 3-Axis Cuts in Spherical Coordinates ...
XZ Cut (Turntable) is Theta=0-360 & Phi=0, or Theta=0-180 & Phi=0 then Theta=180-0 & Phi=180
YZ Cut is Theta=0-360 & Phi=90, or Theta=0-180 & Phi=90 then Theta=180-0 & Phi=270
XY Cut is Theta=90 & Phi=0-360

Notes And Observations
Customers may download 3-Dimensional pattern visualization software (use on Theta-Ring.TXT file) from http://antennatestlab.com/antenna-education-tutorials/plotting

Frequency (MHz)	Integrated Spherical Gain (dBi)	Estimated Radiation Efficiency (%)
1200	2.52	15.18
1205	2.52	15.17
1210	2.52	15.17
1215	2.52	15.17
1220	2.52	15.17
1225	2.52	15.17
1230	2.52	15.17
1235	2.52	15.17
1240	2.52	15.17
1245	2.52	15.17
1250	2.52	15.17
1255	2.52	15.17
1260	2.52	15.17
1265	2.52	15.17
1270	2.52	15.17
1275	2.52	15.17
1280	2.52	15.17
1285	2.52	15.17
1290	2.52	15.17
1295	2.52	15.17
1300	2.52	15.17
1305	2.52	15.17
1310	2.52	15.17
1315	2.52	15.17
1320	2.52	15.17
1325	2.52	15.17
1330	2.52	15.17
1335	2.52	15.17
1340	2.52	15.17
1345	2.52	15.17
1350	2.52	15.17
1355	2.52	15.17
1360	2.52	15.17
1365	2.52	15.17
1370	2.52	15.17
1375	2.52	15.17
1380	2.52	15.17
1385	2.52	15.17
1390	2.52	15.17
1395	2.52	15.17
1400	2.52	15.17
1405	2.52	15.17
1410	2.52	15.17
1415	2.52	15.17
1420	2.52	15.17
1425	2.52	15.17
1430	2.52	15.17
1435	2.52	15.17
1440	2.52	15.17
1445	2.52	15.17
1450	2.52	15.17
1455	2.52	15.17
1460	2.52	15.17
1465	2.52	15.17
1470	2.52	15.17
1475	2.52	15.17
1480	2.52	15.17
1485	2.52	15.17
1490	2.52	15.17
1495	2.52	15.17
1500	2.52	15.17
1505	2.52	15.17
1510	2.52	15.17
1515	2.52	15.17
1520	2.52	15.17
1525	2.52	15.17
1530	2.52	15.17
1535	2.52	15.17
1540	2.52	15.17
1545	2.52	15.17
1550	2.52	15.17
1555	2.52	15.17
1560	2.52	15.17
1565	2.52	15.17
1570	2.52	15.17
1575	2.52	15.17
1580	2.52	15.17
1585	2.52	15.17
1590	2.52	15.17
1595	2.52	15.17
1600	2.52	15.17
1605	2.52	15.17
1610	2.52	15.17
1615	2.52	15.17
1620	2.52	15.17
1625	2.52	15.17
1630	2.52	15.17
1635	2.52	15.17
1640	2.52	15.17
1645	2.52	15.17
1650	2.52	15.17
1655	2.52	15.17
1660	2.52	15.17
1665	2.52	15.17
1670	2.52	15.17
1675	2.52	15.17
1680	2.52	15.17
1685	2.52	15.17
1690	2.52	15.17
1695	2.52	15.17
1700	2.52	15.17
1705	2.52	15.17
1710	2.52	15.17
1715	2.52	15.17
1720	2.52	15.17
1725	2.52	15.17
1730	2.52	15.17
1735	2.52	15.17
1740	2.52	15.17
1745	2.52	15.17
1750	2.52	15.17
1755	2.52	15.17
1760	2.52	15.17
1765	2.52	15.17
1770	2.52	15.17
1775	2.52	15.17
1780	2.52	15.17
1785	2.52	15.17
1790	2.52	15.17
1795	2.52	15.17
1800	2.52	15.17
1805	2.52	15.17
1810	2.52	15.17
1815	2.52	15.17
1820	2.52	15.17
1825	2.52	15.17
1830	2.52	15.17
1835	2.52	15.17
1840	2.52	15.17
1845	2.52	15.17
1850	2.52	15.17
1855	2.52	15.17
1860	2.52	15.17
1865	2.52	15.17
1870	2.52	15.17
1875	2.52	15.17
1880	2.52	15.17
1885	2.52	15.17
1890	2.52	15.17
1895	2.52	15.17
1900	2.52	15.17
1905	2.52	15.17
1910	2.52	15.17
1915	2.52	15.17
1920	2.52	15.17
1925	2.52	15.17
1930	2.52	15.17
1935	2.52	15.17
1940	2.52	15.17
1945	2.52	15.17
1950	2.52	15.17
1955	2.52	15.17
1960	2.52	15.17
1965	2.52	15.17
1970	2.52	15.17
1975	2.52	15.17
1980	2.52	15.17
1985	2.52	15.17
1990	2.52	15.17
1995	2.52	15.17
2000	2.52	15.17



Frequency [MHz]	Peak Gain (From Highest Direction) in dBi
2102	1.00
2103	1.00
2104	1.00
2105	1.00
2106	1.00
2107	1.00
2108	1.00
2109	1.00
2110	1.00
2111	1.00
2112	1.00
2113	1.00
2114	1.00
2115	1.00
2116	1.00
2117	1.00
2118	1.00
2119	1.00
2120	1.00
2121	1.00
2122	1.00
2123	1.00
2124	1.00
2125	1.00
2126	1.00
2127	1.00
2128	1.00
2129	1.00
2130	1.00
2131	1.00
2132	1.00
2133	1.00
2134	1.00
2135	1.00
2136	1.00
2137	1.00
2138	1.00
2139	1.00
2140	1.00
2141	1.00
2142	1.00
2143	1.00
2144	1.00
2145	1.00
2146	1.00
2147	1.00
2148	1.00
2149	1.00
2150	1.00
2151	1.00
2152	1.00
2153	1.00
2154	1.00
2155	1.00
2156	1.00
2157	1.00
2158	1.00
2159	1.00
2160	1.00
2161	1.00
2162	1.00
2163	1.00
2164	1.00
2165	1.00
2166	1.00
2167	1.00
2168	1.00
2169	1.00
2170	1.00
2171	1.00
2172	1.00
2173	1.00
2174	1.00
2175	1.00
2176	1.00
2177	1.00
2178	1.00
2179	1.00
2180	1.00
2181	1.00
2182	1.00
2183	1.00
2184	1.00
2185	1.00
2186	1.00
2187	1.00
2188	1.00
2189	1.00
2190	1.00
2191	1.00
2192	1.00
2193	1.00
2194	1.00
2195	1.00
2196	1.00
2197	1.00
2198	1.00
2199	1.00
2200	1.00
2201	1.00
2202	1.00
2203	1.00
2204	1.00
2205	1.00
2206	1.00
2207	1.00
2208	1.00
2209	1.00
2210	1.00
2211	1.00
2212	1.00
2213	1.00
2214	1.00
2215	1.00
2216	1.00
2217	1.00
2218	1.00
2219	1.00
2220	1.00
2221	1.00
2222	1.00
2223	1.00
2224	1.00
2225	1.00
2226	1.00
2227	1.00
2228	1.00
2229	1.00
2230	1.00
2231	1.00
2232	1.00
2233	1.00
2234	1.00
2235	1.00
2236	1.00
2237	1.00
2238	1.00
2239	1.00
2240	1.00
2241	1.00
2242	1.00
2243	1.00
2244	1.00
2245	1.00
2246	1.00
2247	1.00
2248	1.00
2249	1.00
2250	1.00
2251	1.00
2252	1.00
2253	1.00
2254	1.00
2255	1.00
2256	1.00
2257	1.00
2258	1.00
2259	1.00
2260	1.00
2261	1.00
2262	1.00
2263	1.00
2264	1.00
2265	1.00
2266	1.00
2267	1.00
2268	1.00
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2271	1.00
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2273	1.00
2274	1.00
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2278	1.00
2279	1.00
2280	1.00
2281	1.00
2282	1.00
2283	1.00
2284	1.00
2285	1.00
2286	1.00
2287	1.00
2288	1.00
2289	1.00
2290	1.00
2291	1.00
2292	1.00
2293	1.00
2294	1.00
2295	1.00
2296	1.00
2297	1.00
2298	1.00
2299	1.00
2300	1.00
2301	1.00
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2303	1.00
2304	1.00
2305	1.00
2306	1.00
2307	1.00
2308	1.00
2309	1.00
2310	1.00
2311	1.00
2312	1.00
2313	1.00
2314	1.00
2315	1.00
2316	1.00
2317	1.00
2318	1.00
2319	1.00
2320	1.00
2321	1.00
2322	1.00
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2352	1.00
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2361	1.00
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2395	1.00
2396	1.00
2397	1.00
2398	1.00
2399	1.00
2400	1.00

