

RF Performance Test Report

AT-LP70XBT

2023.12.07

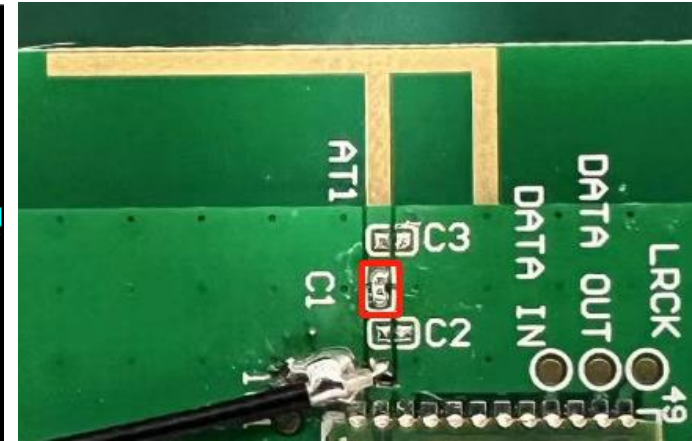
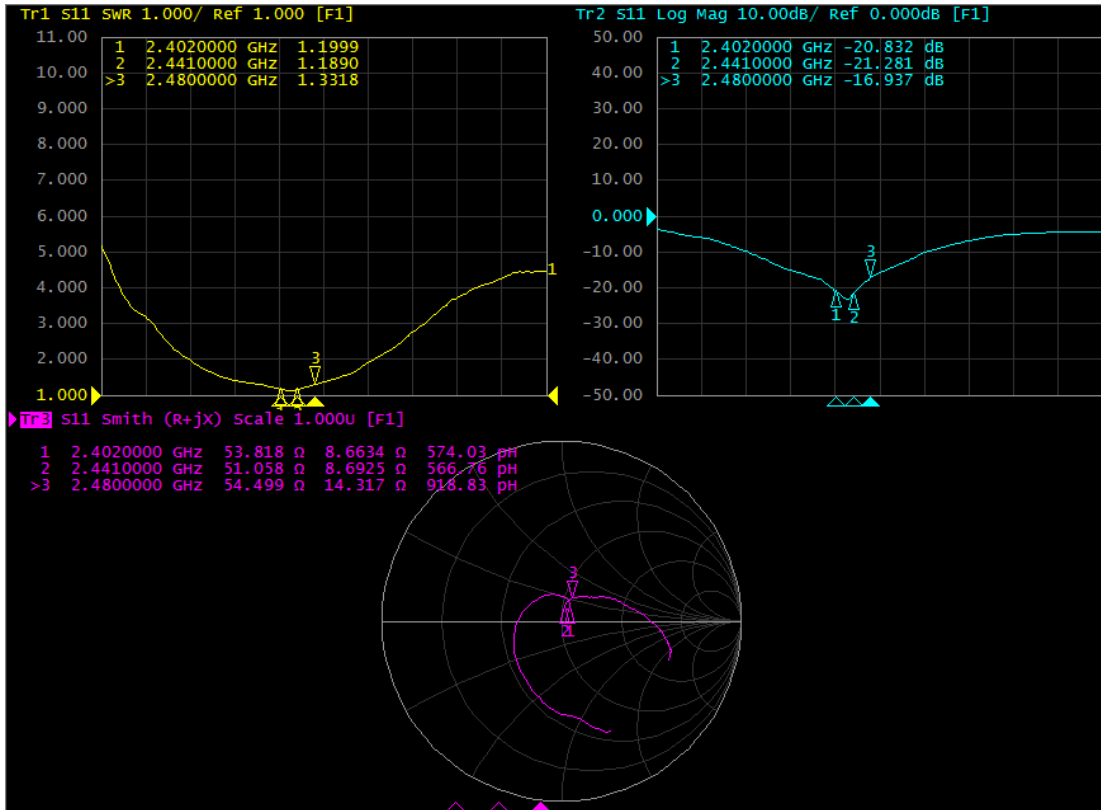
TESTER:QIANGXIAO

Product appearance



Antenna Performance Test Report

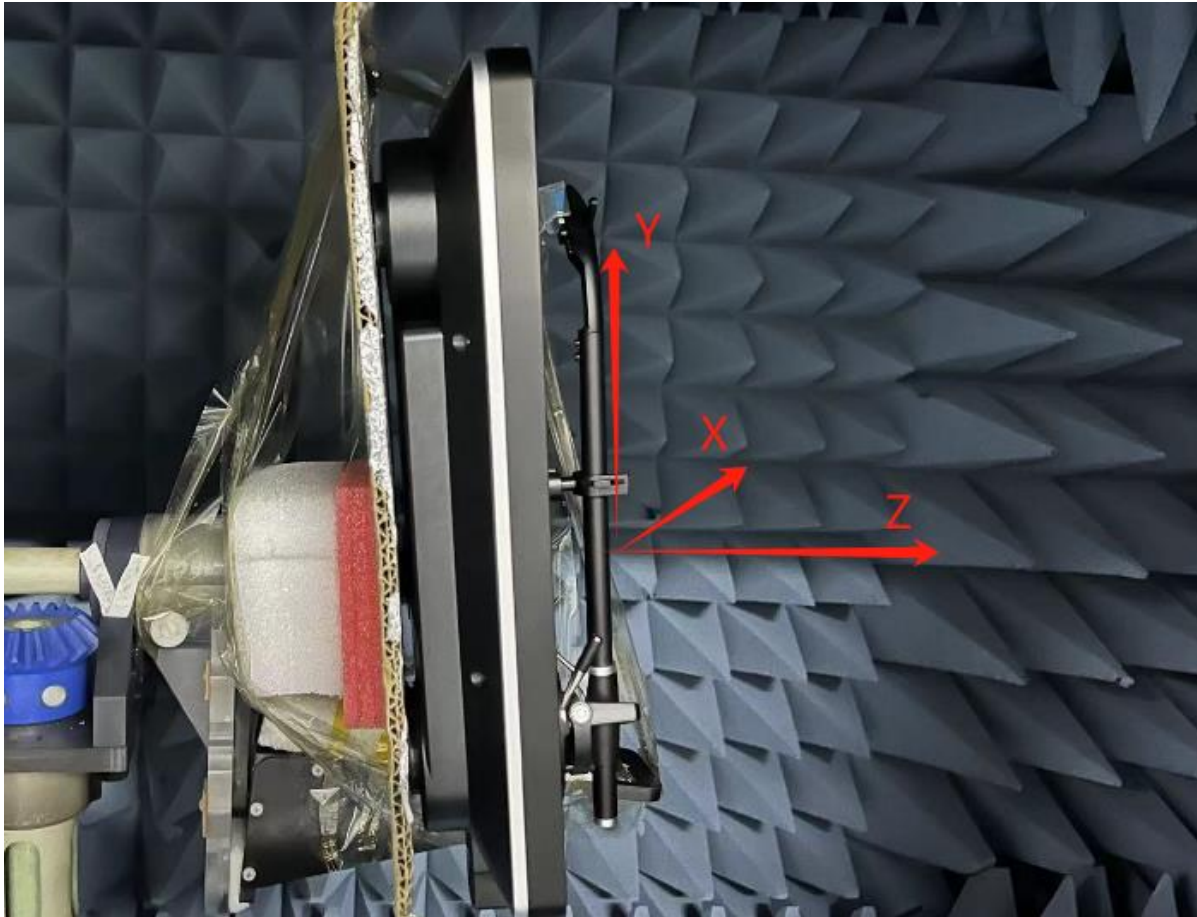
VSWR、Return loss and impedance :



C3=NC
 C1=3.6nH,Sunlord P/N:SDCL1005C3N6STDF
 C2=NC

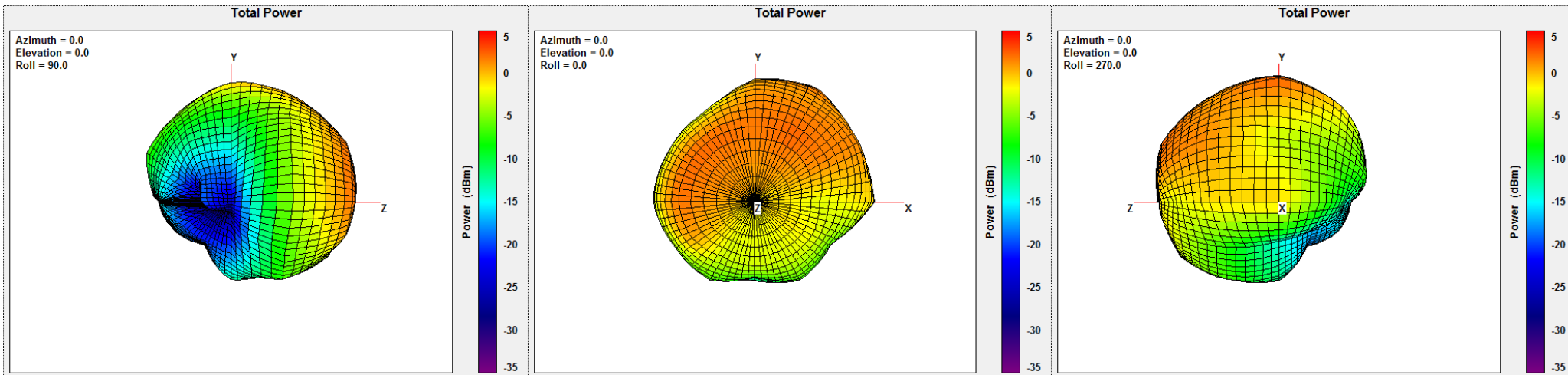
Antenna Performance Test Report

Antenna Test Settings: Vertical



Antenna Performance Test Report

Antenna Efficiency 2441MHz 3D Radiation Pattern :Vertical





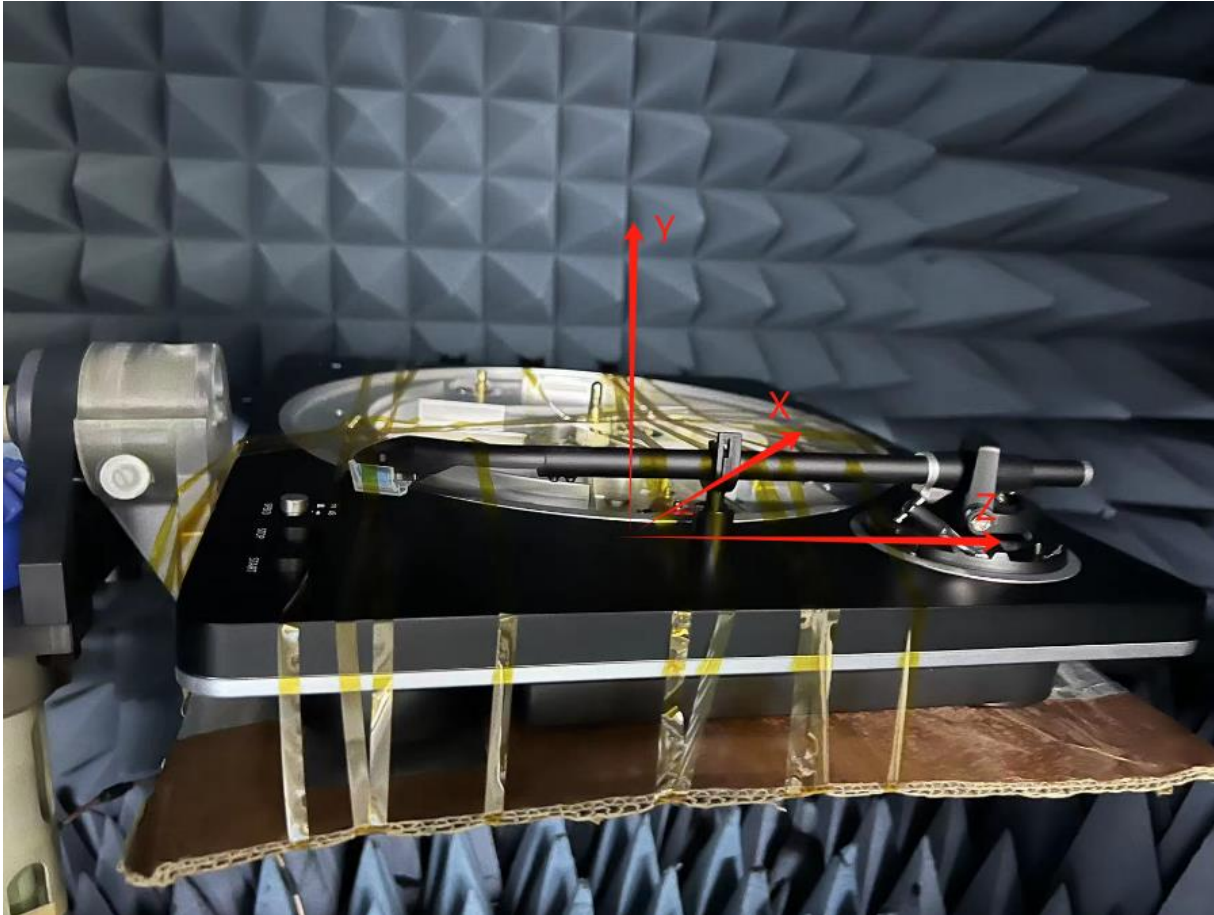
RF Performance Test Report

Antenna performance data:Vertical

Total Attributes	Point Values	Ant. Port Input Pwr. (dBm)	Tot. Rad. Pwr. (dBm)	Peak EIRP (dBm)	Directivity (dBi)	Efficiency (dB)	Efficiency (%)	Gain (dBi)									
	Frequency (MHz)																
	2400	0	-4.04082	3.36256	7.40338	-4.04082	39.4382	3.36256		2445	0	-3.71061	2.7967	6.50731	-3.71061	42.5538	2.7967
	2401	0	-4.0364	3.34695	7.38334	-4.0364	39.4784	3.34695		2446	0	-3.69694	2.81151	6.50844	-3.69694	42.688	2.81151
	2402	0	-4.03277	3.33479	7.36796	-4.03277	39.5115	3.33479		2447	0	-3.67846	2.83465	6.51311	-3.67846	42.87	2.83465
	2403	0	-4.03735	3.30703	7.34438	-4.03735	39.4698	3.30703		2448	0	-3.65664	2.86263	6.51927	-3.65664	43.086	2.86263
	2404	0	-4.04403	3.27736	7.3214	-4.04403	39.4091	3.27736		2449	0	-3.62774	2.90159	6.52933	-3.62774	43.3737	2.90159
	2405	0	-4.0432	3.26085	7.30405	-4.0432	39.4167	3.26085		2450	0	-3.60209	2.93656	6.53865	-3.60209	43.6306	2.93656
	2406	0	-4.04335	3.23908	7.28242	-4.04335	39.4153	3.23908		2451	0	-3.5814	2.96473	6.54613	-3.5814	43.8389	2.96473
	2407	0	-4.03762	3.22516	7.26278	-4.03762	39.4673	3.22516		2452	0	-3.55953	2.99429	6.55382	-3.55953	44.0602	2.99429
	2408	0	-4.03459	3.208	7.24259	-4.03459	39.4949	3.208		2453	0	-3.54285	3.01539	6.55824	-3.54285	44.2298	3.01539
	2409	0	-4.0288	3.19346	7.22227	-4.0288	39.5476	3.19346		2454	0	-3.52458	3.0377	6.56228	-3.52458	44.4163	3.0377
	2410	0	-4.02198	3.18043	7.20241	-4.02198	39.6097	3.18043		2455	0	-3.51203	3.05355	6.56557	-3.51203	44.5448	3.05355
	2411	0	-4.01789	3.16388	7.18177	-4.01789	39.647	3.16388		2456	0	-3.49681	3.07387	6.57068	-3.49681	44.7011	3.07387
	2412	0	-4.00791	3.15685	7.16476	-4.00791	39.7383	3.15685		2457	0	-3.48249	3.09584	6.57834	-3.48249	44.8488	3.09584
	2413	0	-3.99679	3.14645	7.14324	-3.99679	39.8402	3.14645		2458	0	-3.46306	3.12091	6.58397	-3.46306	45.0499	3.12091
	2414	0	-4.00416	3.11518	7.11935	-4.00416	39.7726	3.11518		2459	0	-3.4405	3.15169	6.5922	-3.4405	45.2845	3.15169
	2415	0	-4.00251	3.09862	7.10113	-4.00251	39.7877	3.09862		2460	0	-3.43046	3.18521	6.61567	-3.43046	45.3894	3.18521
	2416	0	-4.005	3.07383	7.07883	-4.005	39.7649	3.07383		2461	0	-3.42296	3.21262	6.63558	-3.42296	45.4678	3.21262
	2417	0	-4.00366	3.056	7.05966	-4.00366	39.7772	3.056		2462	0	-3.40722	3.23977	6.64699	-3.40722	45.6329	3.23977
	2418	0	-4.00104	3.03884	7.03988	-4.00104	39.8012	3.03884		2463	0	-3.40182	3.25686	6.65868	-3.40182	45.6896	3.25686
	2419	0	-4.0116	3.00433	7.01594	-4.0116	39.7045	3.00433		2464	0	-3.39281	3.27114	6.66394	-3.39281	45.7846	3.27114
	2420	0	-4.0067	2.98731	6.99401	-4.0067	39.7493	2.98731		2465	0	-3.39726	3.27996	6.67722	-3.39726	45.7377	3.27996
	2421	0	-4.01201	2.95478	6.96679	-4.01201	39.7008	2.95478		2466	0	-3.39043	3.29383	6.68426	-3.39043	45.8097	3.29383
	2422	0	-4.01641	2.92401	6.94042	-4.01641	39.6806	2.92401		2467	0	-3.38147	3.3101	6.69156	-3.38147	45.9043	3.3101
	2423	0	-4.01782	2.8947	6.91252	-4.01782	39.6477	2.8947		2468	0	-3.3783	3.31897	6.69728	-3.3783	45.9378	3.31897
	2424	0	-4.01871	2.86445	6.88316	-4.01871	39.6396	2.86445		2469	0	-3.37534	3.32702	6.70237	-3.37534	45.9691	3.32702
	2425	0	-4.02464	2.82978	6.85443	-4.02464	39.5855	2.82978		2470	0	-3.36992	3.33308	6.703	-3.36992	46.0265	3.33308
	2426	0	-4.02263	2.80717	6.82979	-4.02263	39.6039	2.80717		2471	0	-3.36546	3.33248	6.69794	-3.36546	46.0738	3.33248
	2427	0	-4.01769	2.7903	6.80798	-4.01769	39.6489	2.7903		2472	0	-3.35564	3.33867	6.69431	-3.35564	46.1781	3.33867
	2428	0	-4.00877	2.77229	6.78106	-4.00877	39.7304	2.77229		2473	0	-3.34708	3.34275	6.68983	-3.34708	46.2692	3.34275
	2429	0	-4.00674	2.74928	6.75602	-4.00674	39.749	2.74928		2474	0	-3.33923	3.34227	6.68149	-3.33923	46.353	3.34227
	2430	0	-3.99554	2.73361	6.72916	-3.99554	39.8516	2.73361		2475	0	-3.33329	3.33487	6.66816	-3.33329	46.4163	3.33487
	2431	0	-3.98739	2.71174	6.69913	-3.98739	39.9265	2.71174		2476	0	-3.32124	3.33104	6.65228	-3.32124	46.5453	3.33104
	2432	0	-3.96635	2.71232	6.67867	-3.96635	40.1204	2.71232		2477	0	-3.3218	3.31805	6.63985	-3.3218	46.5393	3.31805
	2433	0	-3.94722	2.7096	6.65682	-3.94722	40.2975	2.7096		2478	0	-3.31841	3.30361	6.62202	-3.31841	46.5756	3.30361
	2434	0	-3.93128	2.70475	6.63603	-3.93128	40.4457	2.70475		2479	0	-3.31832	3.28313	6.60145	-3.31832	46.5766	3.28313
	2435	0	-3.90617	2.7096	6.61577	-3.90617	40.6802	2.7096		2480	0	-3.32336	3.2638	6.58716	-3.32336	46.5226	3.2638
	2436	0	-3.88568	2.71133	6.59701	-3.88568	40.8726	2.71133									
	2437	0	-3.85863	2.72553	6.58415	-3.85863	41.128	2.72553									
	2438	0	-3.83572	2.7336	6.56932	-3.83572	41.3454	2.7336									
	2439	0	-3.81667	2.73962	6.5563	-3.81667	41.5272	2.73962									
	2440	0	-3.79975	2.74378	6.54353	-3.79975	41.6893	2.74378									
	2441	0	-3.77151	2.74655	6.5306	-3.77151	41.9613	2.74655									
	2442	0	-3.76178	2.76115	6.52293	-3.76178	42.0554	2.76115									
	2443	0	-3.74259	2.77469	6.51729	-3.74259	42.2416	2.77469									
	2444	0	-3.73263	2.77478	6.50741	-3.73263	42.3386	2.77478									
	2445	0	-3.71061	2.7967	6.50731	-3.71061	42.5538	2.7967									

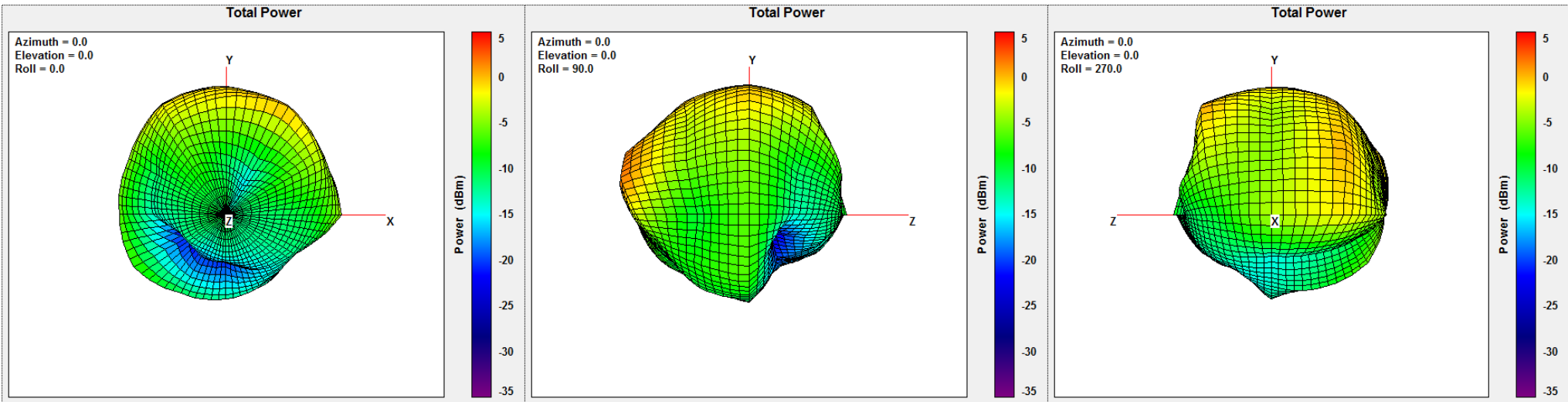
Antenna Performance Test Report

Antenna Test Settings:Horizontal



Antenna Performance Test Report

Antenna Efficiency 2441MHz 3D Radiation Pattern :Horizontal





RF Performance Test Report

Antenna performance data:Horizontal

Total Attributes	Point Values	Ant. Port Input Pwr. (dBm)	Tot. Rad. Pwr. (dBm)	Peak EIRP (dBm)	Directivity (dBi)	Efficiency (dB)	Efficiency (%)	Gain (dBi)											
	Frequency (MHz)																		
	2400	0	-4.76141	2.43099	7.1924	-4.76141	33.4086	2.43099		2445	0	-4.69678	2.27296	6.96973	-4.69678	33.9096	2.27296		
	2401	0	-4.75428	2.38039	7.13468	-4.75428	33.4635	2.38039		2446	0	-4.68128	2.25973	6.94101	-4.68128	34.0308	2.25973		
	2402	0	-4.74872	2.32779	7.07651	-4.74872	33.5064	2.32779		2447	0	-4.66129	2.25021	6.9115	-4.66129	34.1878	2.25021		
	2403	0	-4.74928	2.2701	7.01938	-4.74928	33.5021	2.2701		2448	0	-4.638	2.23636	6.87436	-4.638	34.3716	2.23636		
	2404	0	-4.75277	2.21455	6.96732	-4.75277	33.4752	2.21455		2449	0	-4.60897	2.22854	6.83751	-4.60897	34.6021	2.22854		
	2405	0	-4.74991	2.16695	6.91686	-4.74991	33.4972	2.16695		2450	0	-4.58284	2.21104	6.79387	-4.58284	34.811	2.21104		
	2406	0	-4.74774	2.1239	6.87164	-4.74774	33.514	2.1239		2451	0	-4.56077	2.18915	6.74992	-4.56077	34.9883	2.18915		
	2407	0	-4.74324	2.08345	6.82669	-4.74324	33.5487	2.08345		2452	0	-4.53707	2.17991	6.71699	-4.53707	35.1797	2.17991		
	2408	0	-4.74244	2.04762	6.79006	-4.74244	33.5549	2.04762		2453	0	-4.51765	2.18794	6.70559	-4.51765	35.3374	2.18794		
	2409	0	-4.73997	2.0156	6.75556	-4.73997	33.574	2.0156		2454	0	-4.49745	2.19749	6.69494	-4.49745	35.5022	2.19749		
	2410	0	-4.73528	1.99083	6.72611	-4.73528	33.6103	1.99083		2455	0	-4.483	2.19641	6.6794	-4.483	35.6205	2.19641		
	2411	0	-4.73393	1.96906	6.70299	-4.73393	33.6207	1.96906		2456	0	-4.46677	2.19916	6.66594	-4.46677	35.7538	2.19916		
	2412	0	-4.72939	1.95329	6.68268	-4.72939	33.6559	1.95329		2457	0	-4.45188	2.2	6.65188	-4.45188	35.8767	2.2		
	2413	0	-4.72686	1.93981	6.66667	-4.72686	33.6755	1.93981		2458	0	-4.43536	2.20503	6.64039	-4.43536	36.0134	2.20503		
	2414	0	-4.73346	1.92044	6.6539	-4.73346	33.6244	1.92044		2459	0	-4.4184	2.21133	6.62973	-4.4184	36.1543	2.21133		
	2415	0	-4.73567	1.91297	6.64864	-4.73567	33.6073	1.91297		2460	0	-4.41094	2.1991	6.61004	-4.41094	36.2165	2.1991		
	2416	0	-4.74122	1.90103	6.64225	-4.74122	33.5643	1.90103		2461	0	-4.40512	2.18567	6.59079	-4.40512	36.265	2.18567		
	2417	0	-4.74397	1.89953	6.6435	-4.74397	33.543	1.89953		2462	0	-4.39587	2.18345	6.57932	-4.39587	36.3423	2.18345		
	2418	0	-4.74693	1.90101	6.64794	-4.74693	33.5202	1.90101		2463	0	-4.39357	2.1715	6.56506	-4.39357	36.3616	2.1715		
	2419	0	-4.75984	1.89885	6.65869	-4.75984	33.4207	1.89885		2464	0	-4.39052	2.1663	6.55682	-4.39052	36.3872	2.1663		
	2420	0	-4.76358	1.90645	6.67003	-4.76358	33.392	1.90645		2465	0	-4.39705	2.14492	6.54197	-4.39705	36.3325	2.14492		
	2421	0	-4.77395	1.91112	6.68506	-4.77395	33.3123	1.91112		2466	0	-4.39666	2.13475	6.53141	-4.39666	36.3357	2.13475		
	2422	0	-4.78448	1.92033	6.70482	-4.78448	33.2316	1.92033		2467	0	-4.39354	2.12692	6.52045	-4.39354	36.3619	2.12692		
	2423	0	-4.79481	1.93367	6.72848	-4.79481	33.1527	1.93367		2468	0	-4.39565	2.11609	6.51175	-4.39565	36.3442	2.11609		
	2424	0	-4.80655	1.95102	6.75756	-4.80655	33.0632	1.95102		2469	0	-4.39866	2.10374	6.50241	-4.39866	36.319	2.10374		
	2425	0	-4.8203	1.96509	6.78539	-4.8203	32.9587	1.96509		2470	0	-4.40064	2.09642	6.49706	-4.40064	36.3024	2.09642		
	2426	0	-4.82439	1.99134	6.81574	-4.82439	32.9277	1.99134		2471	0	-4.40343	2.08797	6.49141	-4.40343	36.2791	2.08797		
	2427	0	-4.82597	2.02042	6.8464	-4.82597	32.9157	2.02042		2472	0	-4.40284	2.08845	6.4913	-4.40284	36.2841	2.08845		
	2428	0	-4.82548	2.05246	6.87794	-4.82548	32.9194	2.05246		2473	0	-4.40199	2.08728	6.48928	-4.40199	36.2911	2.08728		
	2429	0	-4.83227	2.07728	6.90955	-4.83227	32.868	2.07728		2474	0	-4.40228	2.08783	6.49011	-4.40228	36.2888	2.08783		
	2430	0	-4.83283	2.10322	6.93605	-4.83283	32.8638	2.10322		2475	0	-4.40632	2.09121	6.49753	-4.40632	36.255	2.09121		
	2431	0	-4.83599	2.12722	6.96321	-4.83599	32.8398	2.12722		2476	0	-4.40653	2.09911	6.50564	-4.40653	36.2533	2.09911		
	2432	0	-4.82913	2.15822	6.98735	-4.82913	32.8918	2.15822		2477	0	-4.41531	2.09466	6.50997	-4.41531	36.18	2.09466		
	2433	0	-4.82441	2.18756	7.01197	-4.82441	32.9275	2.18756		2478	0	-4.42343	2.08883	6.51225	-4.42343	36.1125	2.08883		
	2434	0	-4.81946	2.20829	7.02776	-4.81946	32.965	2.20829		2479	0	-4.43244	2.08443	6.51687	-4.43244	36.0376	2.08443		
	2435	0	-4.80836	2.23157	7.03993	-4.80836	33.0494	2.23157		2480	0	-4.44478	2.0703	6.51508	-4.44478	35.9354	2.0703		
	2436	0	-4.80111	2.24638	7.04749	-4.80111	33.1047	2.24638											
	2437	0	-4.78757	2.26448	7.05205	-4.78757	33.208	2.26448											
	2438	0	-4.77729	2.27858	7.05587	-4.77729	33.2867	2.27858											
	2439	0	-4.76672	2.28821	7.05494	-4.76672	33.3678	2.28821											
	2440	0	-4.75721	2.28798	7.04518	-4.75721	33.441	2.28798											
	2441	0	-4.73954	2.29955	7.03909	-4.73954	33.5773	2.29955											
	2442	0	-4.73316	2.29329	7.02645	-4.73316	33.6266	2.29329											
	2443	0	-4.72218	2.28756	7.00974	-4.72218	33.7118	2.28756											
	2444	0	-4.71505	2.27814	6.99319	-4.71505	33.7672	2.27814											
	2445	0	-4.69678	2.27296	6.96973	-4.69678	33.9096	2.27296											



Antenna Performance Test Report

RF data summary

AP_LP70XBT				
Frequency(MHz)	Vertical		Horizontal	
	Efficiency (%)	Gain (dBi)	Efficiency (%)	Gain (dBi)
2402	39.5	3.33	33.5	2.32
2441	41.9	2.76	33.5	2.29
2480	46.5	3.26	35.9	2.07
MAX Efficiency	46.57% @2.479GHz		36.38% @2.464GHz	
MAX Gain	3.36dBi @2.400GHz		2.29dBi @2.441GHz	

Antenna Performance Test Report

AT-LP70XBT working distance on copper board test result:

Test condition: Connect JBL charge 2 with **AT-LP70XBT** for testing, Place JBL charge 2 on 80cm high platform, So is **AT-LP70XBT**, rotate **AT-LP70XBT** in 360°, and keep away from JBL charge 2, until JBL charge 2 occurs staccato phenomenon.



Test place: Sunitec parking lot

Test distance: 32m

Test date: 2023-12-7