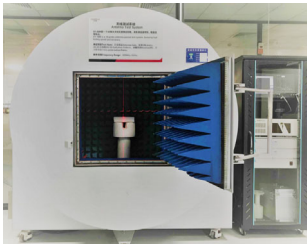
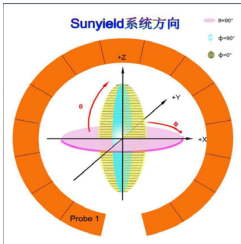
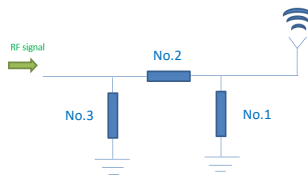
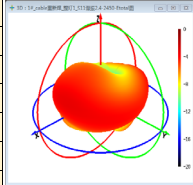
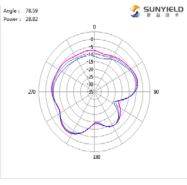
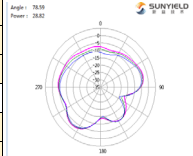
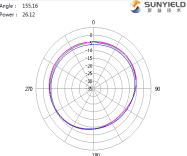


LEEDARSON 立达信		Antenna Test Report		Version: 2025-09-02_V2.5
Product Information				
Client	M071	Protocol	WiFi+BLE	
Project Number	RD0250408002	Sample Quantity	2	
Model Number	LDE42S000A	PCB Version		
Chip Type	ESP32-C3	Structure Version	正式模	
Sample Picutres				
Summary				
No.	Item	Result	Limit	Judgment
1	VSWR	2.3	< 2.5	Pass
2	Antenna efficiency	-6.34	≥-10	Pass
Conclusion	Pass			
Revision history				
Testor	Chenmeihua	Test Date	2025.10.22-2025.10.24	
Version	Date	Revise Content	Reviser	
V2.0	2025.10.27	Establish Report	Chen Meihua	

Manufacturer: SPRING SUNSHINE TECHNOLOGY CO., LIMITED
Address: Room 2401-2404, 24/F., Fu Fai Commercial Centre 27 Hillier Street, Sheung Wan, Hong Kong

Antenna material: Tin-plated copper wire

Test setting						
SY-16M Test System		Sample Picture				
						
Antenna Matching						
		Matching Component				
		Position	No. 1	No. 2	No. 3	
		Item No.				
		Value				
		1st				
		2nd				
		3rd				
Remark						
Passive Test Results						
VNA Data		Chamber Data				
Original Result of Simulation Setting		Frequency (MHz)	Gain (dBi)	Efficiency (dB)	3D	$\theta = 90^\circ$ (XY Plane)
		2400	0.08	-5.04		
		2410	0.09	-5.04		
		2420	-0.26	-5.29		
		2430	-0.57	-5.49		
		2440	-0.51	-5.35		
		2450	-0.61	-5.58		
		2460	-0.98	-5.92		
Final Tuning Result		2470	-1.17	-6.02	$\phi = 0^\circ$ (XZ Plane)	$\phi = 90^\circ$ (YZ Plane)
		2480	-0.99	-5.85		
		2490	-1.19	-6.08		
		2500	-1.41	-6.34		
		—	—	—		
		MIN	-1.41	-6.34		
		MAX	0.09	-5.04		
		AVG	-0.68	-5.64		

Efficiency and Gain											
Spec		Sample #1			Sample #2			Sample #1- Alternative			
Frequency (MHz)	Spec (dB)	Spec (%)	Gain (dB)	Efficiency γ (dB)	Efficiency γ (%)	Gain (dB)	Efficiency γ (dB)	Efficiency γ (%)	Gain (dB)	Efficiency γ (dB)	Efficiency γ (%)
2000			-1.77	-7.96	15.99	-2.00	-8.12	15.40			
2010			-2.11	-8.41	14.42	-2.36	-8.51	14.08			
2020			-2.24	-8.67	13.58	-2.68	-8.90	12.87			
2030			-1.66	-8.11	15.46	-2.26	-8.42	14.38			
2040			-1.31	-7.87	16.34	-1.89	-8.11	15.44			
2050			-1.70	-8.27	14.89	-2.39	-8.61	13.78			
2060			-1.59	-8.01	15.80	-2.35	-8.51	14.10			
2070			-1.30	-7.20	19.06	-2.07	-7.71	16.94			
2080			-1.58	-7.14	19.32	-2.22	-7.55	17.58			
2090			-2.12	-7.28	18.71	-2.70	-7.72	16.90			
2100			-2.15	-7.00	19.94	-2.46	-7.41	18.17			
2110			-2.13	-6.68	21.46	-1.93	-6.90	20.43			
2120			-3.07	-7.38	18.27	-2.55	-7.47	17.89			
2130			-3.32	-7.68	17.06	-2.87	-7.82	16.52			
2140			-2.94	-7.42	18.17	-2.49	-7.49	17.84			
2150			-2.79	-7.34	18.44	-2.20	-7.29	18.67			
2160			-3.15	-7.73	16.87	-2.60	-7.78	16.68			
2170			-2.93	-7.36	18.39	-2.38	-7.57	17.48			
2180			-2.57	-6.73	21.21	-1.72	-6.94	20.24			
2190			-2.88	-6.82	20.77	-1.80	-7.05	19.73			
2200			-3.10	-7.09	19.54	-2.22	-7.52	17.71			
2210			-2.81	-6.72	21.30	-2.03	-7.26	18.78			
2220			-2.48	-6.29	23.50	-1.71	-6.86	20.63			
2230			-2.95	-6.67	21.54	-2.36	-7.35	18.40			
2240			-2.99	-6.74	21.17	-2.69	-7.58	17.45			
2250			-2.50	-6.22	23.86	-2.38	-7.10	19.48			
2260			-2.24	-5.99	25.17	-2.35	-6.91	20.35			
2270			-2.16	-5.98	25.24	-2.67	-7.06	19.68			
2280			-1.73	-5.61	27.50	-2.44	-6.69	21.43			
2290			-1.04	-5.08	31.06	-1.49	-5.98	25.24			
2300			-0.90	-5.16	30.49	-1.51	-5.99	25.17			
2310			-0.74	-5.15	30.54	-1.59	-5.98	25.23			
2320			-0.50	-4.91	32.28	-1.33	-5.61	27.47			
2330			-0.15	-4.66	34.21	-0.94	-5.19	30.27			
2340			-0.49	-5.05	31.23	-1.28	-5.54	27.91			
2350			-0.38	-5.07	31.11	-1.06	-5.42	28.74			
2360			-0.09	-4.90	32.35	-0.59	-5.00	31.63			
2370			0.01	-4.84	32.80	-0.43	-4.83	32.87			
2380			-0.34	-5.14	30.61	-0.78	-5.08	31.02			
2390			-0.11	-5.22	30.09	-0.50	-5.08	31.06			
2400			0.08	-5.04	31.31	-0.33	-4.90	32.33			
2410			0.09	-5.04	31.36	-0.39	-4.98	31.80			
2420			-0.26	-5.29	29.59	-0.78	-5.27	29.69			
2430			-0.57	-5.49	28.24	-1.14	-5.52	28.07			
2440			-0.51	-5.35	29.16	-1.14	-5.45	28.52			
2450			-0.61	-5.58	27.70	-1.29	-5.74	26.69			
2460			-0.98	-5.92	25.56	-1.71	-6.16	24.23			
2470			-1.17	-6.02	25.00	-1.96	-6.33	23.30			
2480			-0.99	-5.85	26.02	-1.82	-6.23	23.82			
2490			-1.19	-6.08	24.68	-2.03	-6.51	22.35			
2500			-1.41	-6.34	23.21	-2.29	-6.83	20.74			
2510			-1.14	-6.09	24.61	-2.03	-6.61	21.85			
2520			-1.18	-6.02	25.01	-2.08	-6.56	22.96			
2530			-1.52	-6.52	22.27	-2.44	-7.12	19.43			
2540			-1.63	-6.68	21.47	-2.53	-7.30	18.64			
2550			-1.13	-6.29	23.47	-2.01	-6.91	20.36			
2560			-1.53	-6.76	21.08	-2.42	-7.41	18.17			
2570			-2.12	-7.44	18.05	-2.99	-8.08	15.56			
2580			-2.00	-7.39	18.22	-2.86	-8.01	15.80			
2590			-1.53	-7.00	19.96	-2.44	-7.63	17.25			
2600			-1.97	-7.48	17.87	-2.91	-8.10	15.47			
2610			-2.59	-8.04	15.69	-3.48	-8.63	13.71			
2620			-2.13	-7.53	17.67	-2.99	-8.11	15.45			
2630			-2.00	-7.38	18.29	-2.86	-7.98	15.94			
2640			-2.84	-8.18	15.22	-3.67	-8.73	13.41			
2650			-3.13	-8.54	13.98	-3.96	-9.07	12.39			
2660			-2.86	-8.26	14.94	-3.71	-8.78	13.24			
2670			-3.46	-8.84	13.07	-4.28	-9.31	11.71			
2680			-4.24	-9.67	10.80	-5.03	-10.08	9.81			
2690			-3.86	-9.58	11.02	-4.70	-9.99	10.03			
2700			-3.82	-9.50	11.23	-4.69	-9.89	10.27			
2710			-4.65	-10.30	9.33	-5.47	-10.59	8.73			
2720			-5.03	-10.67	8.57	-5.84	-10.89	8.15			
2730			-4.54	-10.18	9.60	-5.29	-10.38	9.16			
2740			-4.75	-10.34	9.26	-5.50	-10.42	9.07			
2750			-5.66	-11.19	7.60	-6.27	-11.11	7.74			
2760			-5.55	-11.10	7.76	-6.11	-10.94	8.04			
2770			-4.97	-10.57	8.76	-5.49	-10.34	9.24			
2780			-5.36	-11.00	7.93	-5.68	-10.57	8.77			
2790			-5.93	-11.59	6.94	-6.11	-11.01	7.93			
2800			-5.49	-11.15	7.68	-5.65	-10.55	8.81			
2810			-5.10	-10.78	8.37	-5.14	-10.07	9.85			
2820			-5.66	-11.37	7.30	-5.53	-10.49	8.94			
2830			-5.92	-11.61	6.91	-5.78	-10.72	8.48			
2840			-5.41	-11.15	7.68	-5.32	-10.29	9.36			
2850			-5.53	-11.29	7.43	-5.35	-10.32	9.29			
2860			-6.01	-11.85	6.53	-5.84	-10.86	8.20			
2870			-5.69	-11.58	6.95	-5.68	-10.69	8.53			
2880			-5.32	-11.20	7.59	-5.42	-10.34	9.26			
2890			-5.91	-11.74	6.69	-6.02	-10.82	8.28			
2900			-6.46	-12.26	5.94	-6.73	-11.43	7.20			
2910			-6.04	-11.81	6.59	-6.52	-11.10	7.77			
2920			-5.93	-11.68	6.79	-6.48	-10.96	8.01			
2930			-6.67	-12.39	5.76	-7.33	-11.69	6.78			
2940			-6.75	-12.48	5.65	-7.62	-11.91	6.44			
2950			-5.97	-11.72	6.73	-6.90	-11.29	7.43			
2960			-5.83	-11.55	7.00	-6.69	-11.05	7.85			
2970			-6.33	-12.05	6.24	-7.23	-11.62	6.89			
2980			-5.97	-11.69	6.78	-7.01	-11.43	7.19			
2990			-5.37	-11.05	7.85	-6.36	-10.83	8.25			
3000			-5.50	-11.35	7.33	-6.54	-11.07	7.81			

