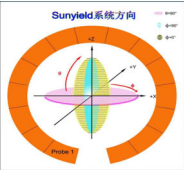
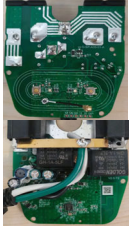
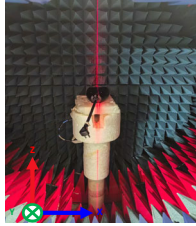
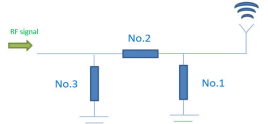
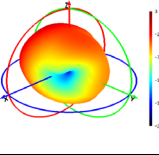
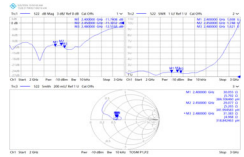
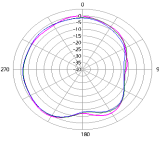
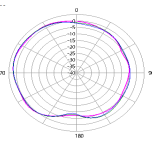
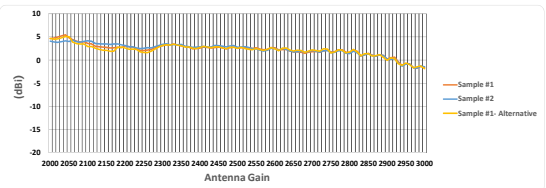
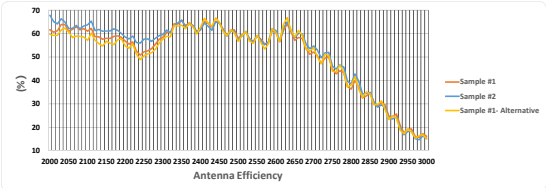
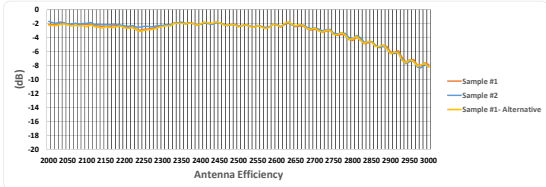


LEEDARSON 立达信		Antenna Test Report		Version: 2026-03-16_V2.6	
Product Information					
Client	M071 NA Matter Outdoor plug		Protocol	WIFI+BLE	
Project Number	RD0251230047		Sample Quantity	2	
Model Number	onboard		PCB Version	D-SP-A35-01-A-V2.0-Y2	
Chip Type	ESP8684(C2)		Structure Version	正式模	
Sample Picutres	 				
Summary			高指标(灯类)_2.4G		
No.	Item	Result	Limit		Judgment
1	VSWR	1.74	<	2.5	Pass
2	Antenna efficiency	-2.47	>	-7	Pass
Conclusion		Pass			
Revision history					
Testor	Shangqing Wei		Test Date	2026.05.06	
Version	Date		Revise Content	Reviser	
V2.0	2026.05.06		Establish Report	Shangqing Wei	

SUNYIELD		SY-16M Test System		Test setting		Sample Picture				
						 				
Antenna Matching										
				Matching Component						
				Position	No.1		No.2		No.3	
				Item No.	C19		L4		C18	
				Value	0.8pF		3.6nH		NC	
				1st	2020310178		2022810152			
				2nd	2020310424		2022810217			
				3rd						
				Remark						
Passive Test Results										
VNA Data				Chamber Data						
Original Result of Simulation Setting				Frequency (MHz)	Gain(dB)	Efficiency (dB)	3D	$\theta=90^{\circ}$ (XY Plane)		
				2400	2.58	-2.07				
				2410	2.8	-1.86				
				2420	2.74	-1.91				
				2430	2.61	-2.02				
				2440	2.72	-1.85				
				2450	2.81	-1.89				
				2460	2.64	-2.08				
Final Tuning Result				2470	2.41	-2.26	$\phi=0^{\circ}$ (XZ Plane)	$\phi=90^{\circ}$ (YZ Plane)		
				2480	2.68	-2.11				
				2490	2.78	-2.1				
				2500	2.55	-2.36				
				MIN	2.41	-2.36				
				MAX	2.81	-1.85				
				AVG	2.67	-2.05				

Efficiency and Gain									
Frequency (MHz)	Sample #1			Sample #2			Sample #1 - Alternative		
	Gain(dB)	Efficiency (dB)	Efficiency (%)	Gain(dB)	Efficiency (dB)	Efficiency (%)	Gain(dB)	Efficiency (dB)	Efficiency (%)
2000	4.62	-2.10	61.64	4.09	-1.69	67.81	4.65	-2.24	59.69
2010	4.76	-2.17	60.62	3.91	-1.86	65.11	4.48	-2.28	59.21
2020	4.96	-2.13	61.22	3.83	-1.93	64.16	4.59	-2.28	59.21
2030	5.2	-1.95	63.88	3.97	-1.78	66.32	4.81	-2.11	61.57
2040	5.44	-1.95	63.87	4.13	-1.87	64.99	5.11	-2.05	62.36
2050	4.81	-2.14	61.03	4.01	-2.06	62.2	5.03	-2.17	60.67
2060	4.38	-2.09	61.80	4.28	-2.06	62.26	3.87	-2.34	58.34
2070	4.07	-2.01	62.90	3.98	-1.97	63.48	3.56	-2.29	58.99
2080	3.89	-2.07	61.40	3.85	-2.07	62.09	3.47	-2.31	58.79
2090	3.96	-2.07	62.07	4.03	-1.99	63.23	3.47	-2.33	58.52
2100	3.59	-2.14	61.08	4.17	-1.96	63.72	2.93	-2.43	57.09
2110	3.52	-2.06	62.22	4.09	-1.85	65.34	2.92	-2.20	60.20
2120	3.01	-2.32	58.67	3.58	-2.13	61.25	2.54	-2.43	57.11
2130	2.9	-2.32	58.83	3.53	-2.09	61.75	2.3	-2.54	55.73
2140	2.78	-2.40	57.57	3.48	-2.15	61.02	2.15	-2.82	54.73
2150	2.76	-2.37	57.99	3.5	-2.14	61.06	2.11	-2.46	56.75
2160	2.63	-2.37	57.93	3.4	-2.14	61.15	1.91	-2.53	55.88
2170	2.66	-2.31	58.80	3.49	-2.08	62.01	1.94	-2.57	55.35
2180	2.76	-2.29	59.01	3.49	-2.12	61.37	2.75	-2.41	57.37
2190	2.68	-2.34	58.38	3.29	-2.22	60.02	2.78	-2.38	57.75
2200	3.06	-2.46	56.78	3.14	-2.33	58.45	2.59	-2.62	54.74
2210	2.85	-2.55	55.57	2.9	-2.39	57.73	2.36	-2.69	53.77
2220	2.83	-2.49	56.42	2.87	-2.29	58.97	2.37	-2.58	55.51
2230	2.42	-2.80	52.54	2.61	-2.5	56.19	2.3	-2.90	51.23
2240	2.1	-2.94	50.84	2.59	-2.52	55.95	1.78	-3.11	48.83
2250	2.08	-2.82	52.24	2.56	-2.39	57.67	1.65	-2.96	50.58
2260	2.17	-2.79	52.59	2.68	-2.39	57.7	1.64	-2.90	51.29
2270	2.33	-2.71	53.56	2.64	-2.46	56.7	1.95	-2.85	51.86
2280	2.67	-2.56	55.41	2.9	-2.37	57.97	2.37	-2.73	53.27
2290	3.01	-2.40	57.59	3.15	-2.28	59.19	2.84	-2.52	55.98
2300	3.12	-2.34	58.40	3.39	-2.25	59.56	3.18	-2.40	57.57
2310	3.31	-2.18	60.51	3.51	-2.11	61.49	3.33	-2.30	58.87
2320	3.27	-2.19	60.41	3.32	-2.19	60.38	3.25	-2.32	58.60
2330	3.45	-1.92	64.24	3.35	-1.97	63.53	3.43	-1.97	63.50
2340	3.23	-1.93	64.07	3.32	-1.9	64.61	3.22	-1.99	63.20
2350	3.12	-1.83	65.66	3.38	-1.82	65.7	3.09	-1.96	63.63
2360	2.89	-1.96	63.43	2.96	-2.02	62.77	2.83	-2.07	62.13
2370	2.78	-1.90	64.53	2.9	-1.94	64.03	2.82	-1.91	64.36
2380	2.44	-1.98	63.44	2.76	-1.98	63.39	2.56	-2.01	62.89
2390	2.51	-2.15	60.95	2.79	-2.18	60.55	2.5	-2.23	59.84
2400	2.58	-2.07	62.08	2.86	-2.1	61.63	2.72	-2.02	62.80
2410	2.8	-1.86	65.16	2.93	-1.9	64.52	2.96	-1.77	66.49
2420	2.74	-1.91	64.45	2.82	-2	63.09	2.8	-1.91	64.46
2430	2.61	-2.02	62.83	2.82	-2.03	61.41	2.7	-1.99	63.29
2440	2.72	-1.95	65.26	3.17	-1.87	65.06	2.86	-1.76	66.67
2450	2.81	-1.89	64.69	3.09	-1.91	64.41	2.87	-1.88	64.86
2460	2.64	-2.08	61.92	3.02	-2.11	61.51	2.63	-2.16	60.87
2470	2.41	-2.28	59.46	2.84	-2.29	58.99	2.45	-2.29	59.07
2480	2.68	-2.11	61.51	3.03	-2.15	61.01	2.76	-2.11	61.47
2490	2.78	-2.10	61.65	3.13	-2.14	61.04	2.77	-2.19	60.41
2500	2.55	-2.36	58.02	2.76	-2.42	57.23	2.53	-2.47	56.67
2510	2.69	-2.26	59.41	2.83	-2.29	58.98	2.76	-2.29	59.04
2520	2.66	-2.17	60.73	2.89	-2.16	60.87	2.5	-2.15	60.92
2530	2.61	-2.39	57.86	2.73	-2.39	57.71	2.35	-2.45	56.86
2540	2.51	-2.47	56.67	2.47	-2.49	56.41	2.28	-2.53	55.86
2550	2.67	-2.29	59.06	2.42	-2.29	59.08	2.48	-2.27	59.24
2560	2.38	-2.39	57.68	2.14	-2.43	57.1	2.25	-2.50	56.20
2570	2.24	-2.55	55.58	1.95	-2.58	55.21	2.09	-2.72	53.45
2580	2.33	-2.50	56.19	2.1	-2.49	56.41	2.27	-2.35	55.61
2590	2.69	-2.12	61.32	2.56	-2.07	62.12	2.68	-2.07	62.11
2600	2.66	-2.17	60.65	2.47	-2.13	61.27	2.42	-2.18	60.53
2610	2.22	-2.48	56.50	2.07	-2.45	56.91	2.03	-2.47	56.69
2620	2.28	-2.12	61.31	2.52	-2.05	62.33	2.57	-1.95	63.90
2630	2.32	-1.93	64.05	2.32	-1.87	65.02	2.63	-1.75	66.81
2640	1.98	-2.17	60.65	1.98	-2.12	61.42	2.16	-2.12	61.44
2650	1.75	-2.43	57.11	1.75	-2.35	58.22	1.97	-2.33	58.52
2660	1.79	-2.34	58.35	1.82	-2.21	60.14	2.13	-2.13	61.28
2670	1.7	-2.37	57.96	1.9	-2.22	59.93	2.06	-2.27	59.30
2680	1.45	-2.70	53.70	1.65	-2.55	55.64	1.46	-2.72	52.46
2690	1.68	-2.91	51.17	1.84	-2.71	53.54	1.95	-2.80	52.47
2700	1.84	-2.83	52.11	2.07	-2.62	54.72	2.22	-2.67	54.02
2710	1.85	-2.96	50.54	1.86	-2.75	53.03	2.07	-2.99	50.20
2720	1.88	-3.25	47.27	1.69	-3.04	49.67	1.94	-3.27	47.11
2730	1.96	-3.06	49.48	2.01	-2.86	51.77	2.45	-2.91	51.15
2740	2.15	-3.00	50.12	2.06	-2.84	51.97	2.39	-2.94	50.77
2750	1.76	-3.49	44.80	1.63	-3.36	46.15	1.51	-3.58	43.90
2760	1.84	-3.68	42.83	1.68	-3.48	44.86	1.76	-3.59	43.71
2770	2.18	-3.55	44.17	2	-3.32	46.59	2.25	-3.32	46.55
2780	2.26	-3.60	43.41	2.07	-3.4	45.73	2.15	-3.62	43.50
2790	1.7	-4.26	37.54	1.5	-4.02	39.64	1.57	-4.29	37.27
2800	1.63	-4.40	36.34	1.43	-4.14	38.52	1.75	-4.19	38.11
2810	2.19	-3.96	40.00	1.95	-3.69	42.75	2.3	-3.81	41.58
2820	1.91	-4.28	37.30	1.55	-4.02	39.61	1.76	-4.39	36.40
2830	0.9	-4.87	32.55	0.93	-4.65	34.26	0.95	-4.85	32.73
2840	1.16	-4.76	33.42	1.11	-4.63	34.44	1.39	-4.55	35.11
2850	1.44	-4.61	34.56	1.35	-4.57	34.9	1.39	-4.66	34.21
2860	1.07	-5.12	30.76	1	-5.13	30.67	0.89	-5.28	29.63
2870	0.87	-5.38	28.95	0.86	-5.43	28.66	0.96	-5.27	29.72
2880	1.14	-5.13	30.70	1.11	-5.29	29.58	1.19	-5.05	31.27
2890	0.99	-5.29	29.55	1	-5.45	28.52	0.64	-5.62	27.44
2900	0.2	-6.09	24.62	0.24	-6.24	23.76	-0.04	-6.32	23.35
2910	0.53	-6.09	24.59	0.19	-6.28	23.56	0.49	-6.05	24.82
2920	0.64	-5.90	25.89	0.32	-6.13	24.27	0.32	-6.21	23.96
2930	-0.38	-6.83	20.73	-0.63	-7.06	19.69	-0.8	-7.26	18.73
2940	-1.13	-7.52	17.70	-1.31	-7.74	16.81	-1.15	-7.61	17.33
2950	-0.75	-7.19	19.12	-0.86	-7.41	18.17	-0.65	-7.16	19.23
2960	-0.78	-7.13	19.38	-0.84	-7.37	18.34	-0.97	-7.42	18.13
2970	-1.63	-7.94	16.07	-1.65	-8.2	15.14	-1.64	-8.10	15.48
2980	-1.76	-8.05	15.87	-1.74	-8.32	14.72	-1.47	-7.88	16.31
2990	-1.36	-7.62	17.29	-1.28	-7.89	16.27	-1.29	-7.70	16.98
3000	-1.61	-7.90	16.20	-1.45	-8.15	15.33	-1.85	-8.24	15.01



Raw File List						
No.	Item	File Type	Sample #1	Sample #2	Sample #1- Alternative	Remark
1	VSWR	SnP				Final Tuning Result
2	Passive data	trx				
3						

天线无源指标（内部）			
强电供电类产品			
产品	频率	基础指标（≥dB）	高指标（≥dB）
灯类	2.4G	-10	-7
	Sub-G	-10	-8
PLUG,Dimmer,温控器等	2.4G	-10	-6
	Sub-G	-10	-7
电池供电类产品/DC直流供电类产品/高数据流类产品（带图像功能）			
产品	频率	基础指标（≥dB）	高指标（≥dB）
遥控器，sensor， 网关，IPC，可视门铃等	2.4G	-6	-4
	Sub-G	-7	-5
备注	1. 客户有要求时，按照客户的要求		