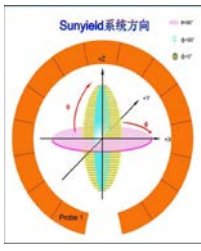
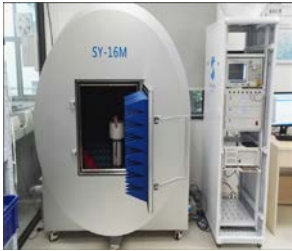


Product Information

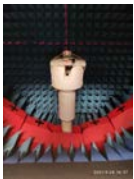
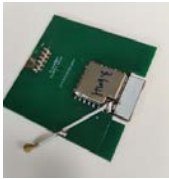
Client	LDS	Protocol	Wi-Fi+BLE	
Product Description	WB3S自主模组	Sample Quantity	3	
Model Number	LDE42D011A	RF PCB Version	M-LDE42D011A-V2.0-Y1	
Chip Type	ESP32-C3FH4 Wi-Fi+BLE	Software Version	ESP32-C3_ECO3_RF_TEST_BIN_V102_20210610.bin	
Sample Picutres				
Author	Deyun Li	Test Date	20211201	
Verifier		Review Date		
Date	Version	Revise Content	Reviser	Comment
20211201	V0.2	Establish report	Deyun Li	

Antenna Passive Test

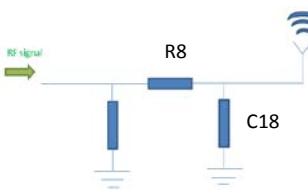
SY-16M Test System



Sample Picture



Antenna Matching

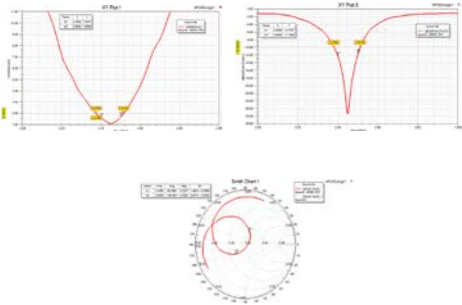


Matching Component

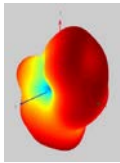
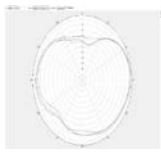
Item NO.	C18	R8				
Value						
1st	0.5pF	3nH				
2nd						
3rd						
ID						
1st	2.02E+09	2.023E+09				
2nd						
3rd						

Passive Test Results

VNA Data



Chamber Data

Gain & Efficiency				3D	$\theta = 90^\circ$ (XY Plane)
Frequency (MHz)	Gain (dB)	Efficiency (dB)	Efficiency (%)		
2400	1.86	-2.31	58.75	$\varphi = 0^\circ$ (XZ Plane)	$\varphi = 90^\circ$ (YZ Plane)
2410	2.04	-2.08	61.94		
2420	2.09	-1.95	63.83		
2430	2.22	-1.90	64.57		
2440	2.12	-1.99	63.24		
2450	2.23	-1.93	64.12		
2460	2.01	-2.09	61.80		
2470	2.22	-1.88	64.86		
2480	2.07	-1.99	63.24		
2490	1.76	-2.20	60.26		
2500	2.05	-1.83	65.61		
MIN	1.76	-2.31	58.75		
MAX	2.23	-1.83	64.86		
AVG	2.06	-2.01	62.66		

Frequency (MHz)	Site ID#	Antenna Height	Spec (%)	Gain(dBi)	Efficiency (dB)	Efficiency(dB)
2000				-5.97	-6.66	13.51
2010				-5.93	-6.99	12.62
2020				-6.08	-6.07	12.39
2030				-5.88	-6.89	13.85
2040				-5.47	-6.47	13.89
2050				-5.83	-6.70	13.49
2060				-5.83	-6.33	13.17
2070				-5.98	-7.53	15.54
2080				-5.17	-8.48	15.56
2090				-6.00	-7.92	18.84
2100				-5.88	-6.64	15.68
2110				-5.98	-6.96	24.77
2120				-5.92	-5.97	25.04
2130				-6.01	-5.92	26.05
2140				-5.88	-5.98	25.42
2150				-5.90	-5.90	25.77
2160				-5.91	-5.96	26.11
2180				-5.13	-6.97	36.56
2200				-5.90	-6.60	35.56
2210				-5.38	-6.37	36.56
2220				-5.07	-6.32	36.98
2230				-5.85	-6.89	35.94
2240				-5.82	-5.92	35.25
2250				-5.14	-6.30	35.48
2260				-6.05	-6.09	36.39
2270				-6.08	-6.17	36.29
2280				-6.05	-6.30	37.16
2290				-6.00	-6.14	36.50
2300				-6.15	-5.70	43.06
2310				-6.36	-5.87	43.95
2320				-6.02	-5.77	41.98
2330				-6.05	-5.94	46.74
2340				-5.88	-5.92	47.33
2350				-5.07	-6.36	50.58
2360				-5.88	-6.33	51.70
2370				-5.38	-5.85	51.38
2380				-5.60	-5.69	53.83
2390				-5.60	-5.60	54.30
2400	-6.62	35.00		-5.86	-5.31	58.73
2410	-6.62	35.00		-5.84	-5.68	60.94
2420	-6.62	35.00		-5.95	-5.95	63.83
2430	-6.62	35.00		-5.94	-6.36	64.72
2440	-6.62	35.00		-5.91	-5.99	65.24
2450	-6.62	35.00		-5.93	-5.91	64.12
2460	-6.62	35.00		-5.91	-5.92	65.50
2470	-6.62	35.00		-5.92	-5.88	65.96
2480	-6.62	35.00		-5.87	-5.86	65.24
2490	-6.62	35.00		-5.76	-5.90	66.26
2500	-6.62	35.00		-5.65	-5.85	65.61
2510	-6.62	35.00		-5.86	-5.71	65.52
2520				-5.75	-5.55	66.53
2530				-5.64	-5.36	66.16
2540				-5.30	-5.66	55.20
2550				-5.12	-5.82	55.24
2560				-5.45	-5.88	43.81
2570				-6.30	-5.17	60.15
2580				-6.82	-5.89	58.23
2590				-6.08	-5.93	44.21
2600				-6.13	-5.61	63.35
2610				-6.13	-5.87	61.02
2620				-6.97	-6.69	54.50
2630				-5.86	-6.72	55.73
2640				-5.08	-5.90	51.62
2650				-5.89	-5.32	49.38
2660				-5.03	-6.03	53.95
2670				-5.05	-5.63	50.86
2680				-5.65	-5.72	36.79
2690				-5.18	-6.30	24.17
2700				-5.89	-6.00	23.06
2710				-5.38	-6.43	22.44
2720				-5.94	-6.36	24.03
2730				-6.02	-7.07	19.62
2740				-6.31	-7.35	18.84
2750				-6.39	-7.35	18.84
2760				-5.89	-6.31	15.78
2770				-5.62	-5.62	15.00
2780				-5.77	-6.45	14.29
2790				-6.06	-6.11	13.21
2800				-5.76	-5.32	13.02
2810				-7.17	-6.68	10.76
2820				-7.64	-10.19	6.57
2830				-6.68	-13.02	7.99
2840				-6.81	-11.36	7.31
2850				-6.10	-11.58	6.95
2860				-10.16	-15.48	2.62
2870				-10.82	-10.64	4.05
2880				-10.86	-13.06	4.91
2890				-11.54	-13.56	3.99
2900				-11.80	-14.36	3.66
2910				-11.88	-14.57	3.53
2920				-12.29	-15.18	3.03
2930				-13.19	-16.13	2.44
2940				-13.16	-16.42	2.28
2950				-13.62	-17.10	1.95
2960				-14.16	-17.66	1.70
2970				-14.68	-18.38	1.45
2980				-14.88	-18.95	1.28
2990				-15.23	-19.79	1.06
3000				-16.63	-20.98	0.80

