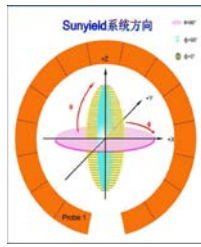
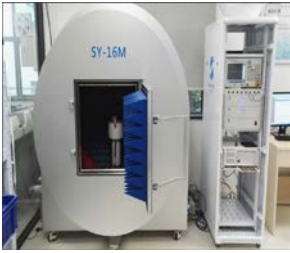


Product Information

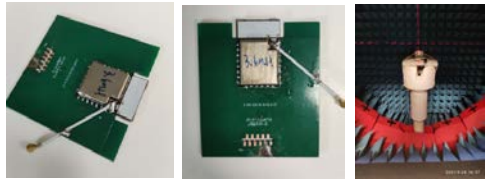
Client	LDS	Protocol	Wi-Fi+BLE	
Product Description	WB3S自主模组	Sample Quantity	3	
Model Number	LDE42D011A	RF PCB Version	M-LDE42D011A-V2.0-Y1	
Chip Type	ESP32-C3FH4 Wi-Fi+BLE	Software Version	ESP32-C3_ECO3_RF_TEST_BIN_V102_20210610.bin	
Sample Picutres				
Author	Deyun Li	Test Date	20211201	
Verifier		Review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

Antenna Passive Test

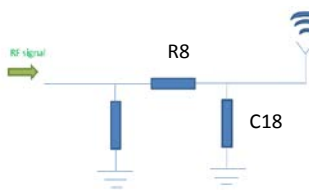
SY-16M Test System



Sample Picture



Antenna Matching

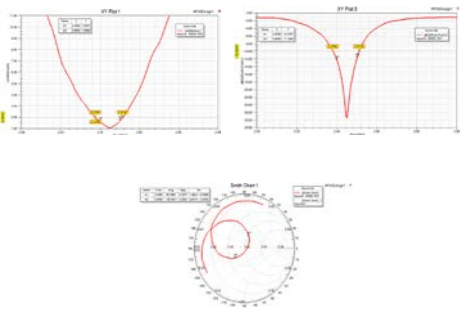


Matching Component

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

Passive Test Results

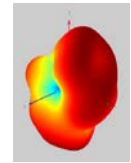
VNA Data



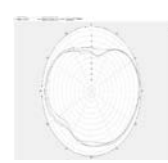
Chamber Data

Gain & Efficiency			
Frequency (MHz)	Gain (dB)	Efficiency (dB)	Efficiency (%)
2400	1.86	-2.31	58.75
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

3D



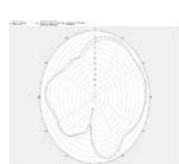
$\theta = 90^\circ$ (XY Plane)



$\phi = 0^\circ$ (XZ Plane)



$\phi = 90^\circ$ (YZ Plane)



Frequency (MHz)	Site ID#	Frequency (MHz)	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				-5.87	-6.47	13.89
2050				-5.83	-6.70	13.49
2060				-5.84	-6.33	13.17
2070				-5.98	-7.53	10.54
2080				-5.17	-8.48	10.56
2090				-6.00	-7.92	10.84
2100				-5.88	-6.64	11.68
2110				-5.98	-6.96	11.77
2120				-5.92	-5.97	10.04
2130				-6.01	-5.92	10.05
2140				-5.88	-5.56	10.42
2150				-5.90	-5.89	11.77
2160				-5.91	-5.56	10.11
2180				-5.13	-6.77	10.56
2200				-5.20	-6.69	10.56
2210				-5.10	-6.37	10.56
2220				-5.07	-6.32	10.58
2230				-5.25	-5.89	10.54
2240				-5.82	-5.92	10.55
2250				-5.14	-6.39	10.48
2260				-5.85	-6.09	10.59
2270				-5.08	-6.17	10.29
2280				-5.65	-6.30	10.16
2290				-5.80	-6.14	10.50
2300				-5.15	-5.70	10.66
2310				-5.96	-5.87	10.95
2320				-5.02	-5.77	11.98
2330				-5.89	-5.49	10.74
2340				-5.88	-5.92	10.55
2350				-5.07	-6.96	10.58
2360				-5.88	-6.10	10.70
2370				-5.38	-5.85	11.38
2380				-5.80	-5.69	11.83
2390				-5.85	-5.60	11.90
2400				-5.86	-5.31	10.73
2410				-5.84	-5.68	10.94
2420				-5.87	-5.95	10.83
2430				-5.84	-5.86	10.87
2440				-5.84	-5.99	10.24
2450				-5.87	-5.91	10.12
2460				-5.84	-5.91	10.50
2470				-5.87	-5.82	10.56
2480				-5.87	-5.86	10.24
2490				-5.84	-5.76	10.26
2500				-5.85	-5.85	10.61
2510				-5.86	-5.71	10.52
2520				-5.75	-5.16	10.53
2530				-5.64	-5.96	10.16
2540				-5.30	-6.66	10.20
2550				-5.12	-6.82	10.24
2560				-5.16	-5.86	11.81
2570				-5.30	-5.17	10.15
2580				-5.82	-5.89	10.23
2590				-5.88	-5.85	11.21
2600				-5.13	-5.61	10.35
2610				-5.13	-5.87	11.02
2620				-5.97	-6.69	10.50
2630				-5.88	-6.72	10.73
2640				-5.08	-5.80	11.62
2650				-5.89	-5.32	10.38
2660				-5.83	-6.03	11.95
2670				-5.05	-5.63	10.86
2680				-5.15	-5.72	10.79
2690				-5.18	-6.10	10.17
2700				-5.89	-6.08	10.66
2710				-5.38	-6.43	10.44
2720				-5.52	-6.36	10.03
2730				-6.02	-7.07	10.62
2740				-6.31	-7.35	10.84
2750				-6.39	-7.35	10.84
2760				-5.89	-6.31	10.78
2770				-5.82	-5.82	10.80
2780				-5.77	-6.15	10.29
2790				-5.89	-5.81	10.21
2800				-5.76	-5.32	11.02
2810				-7.17	-9.68	10.76
2820				-7.61	-10.19	9.57
2830				-6.68	-11.02	7.89
2840				-6.81	-11.36	7.31
2850				-6.10	-11.58	6.95
2860				-10.16	-11.68	5.62
2870				-10.82	-10.64	5.05
2880				-10.86	-10.86	4.91
2890				-11.54	-11.56	3.99
2900				-11.80	-11.36	3.66
2910				-11.88	-11.57	3.53
2920				-10.29	-10.18	3.60
2930				-10.19	-10.13	3.64
2940				-10.16	-10.49	3.28
2950				-10.62	-12.10	1.95
2960				-11.16	-11.68	1.70
2970				-10.68	-10.38	1.65
2980				-10.88	-10.95	1.78
2990				-10.83	-10.79	1.86
3000				-10.63	-10.98	0.80

