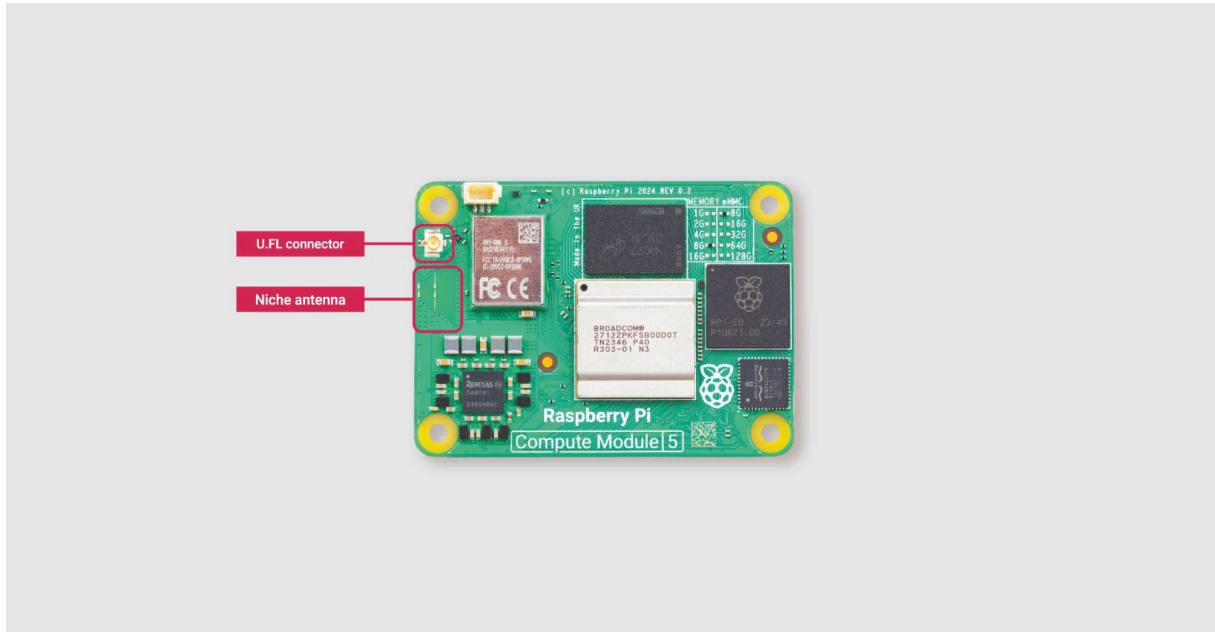


1.Product drawing

Niche antenna

Newer Raspberry Pi single-board computers and microcontrollers include an integrated PCB Niche antenna, providing on-board Wi-Fi and Bluetooth connectivity as standard. Raspberry Pi Compute Module 4 and Raspberry Pi Compute Module 5 also feature one of these PCB Niche antennas, along with a built-in U.FL connector for attaching an external antenna.



Picture (1)

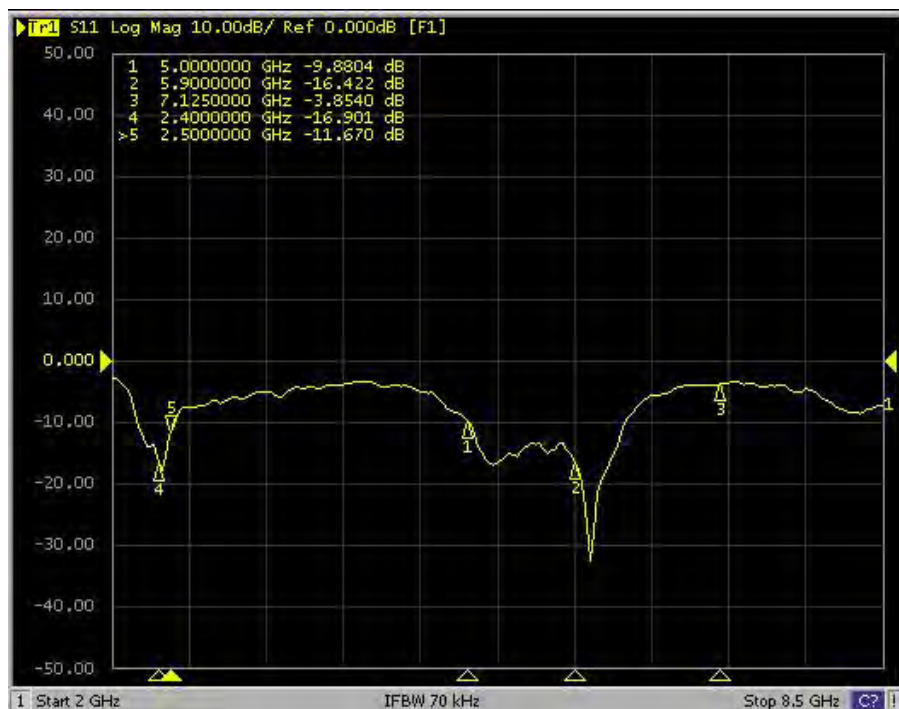
2 Performance Parameters

2-1 Performance Parameters

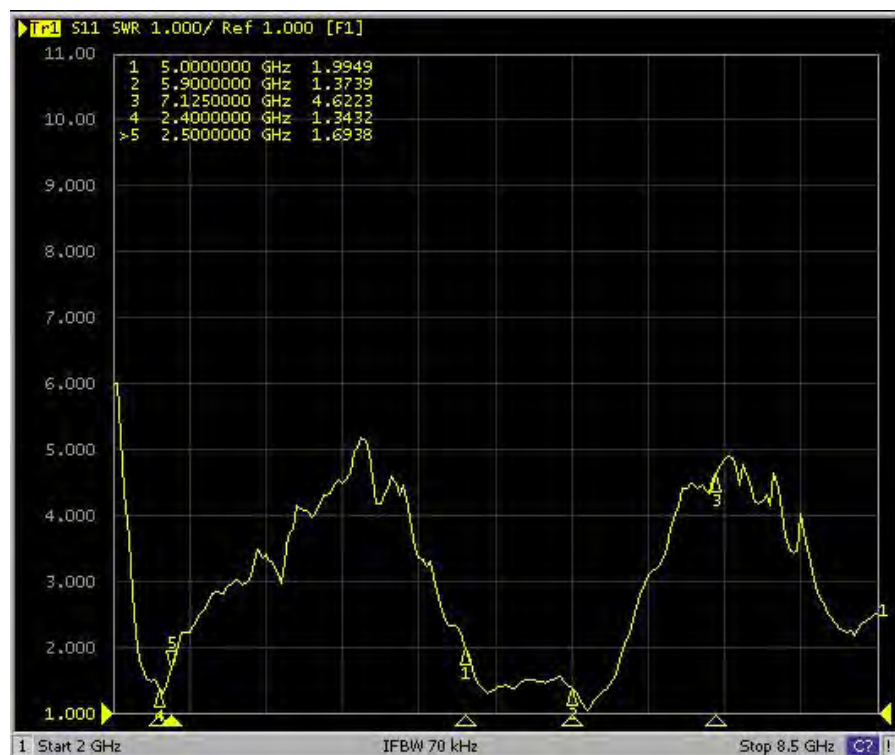
Electrical Parameters	
Frequency Range	2.4-2.5GHz 5.1-5.8GHz
Input Impedence	50 Ω
Standing-wave Ratio	≤3.0
Gain	2.4G:2dBi 5G:3dBi
Working Temperature	-30℃~65℃

2-2Performance Test

S11



SWR

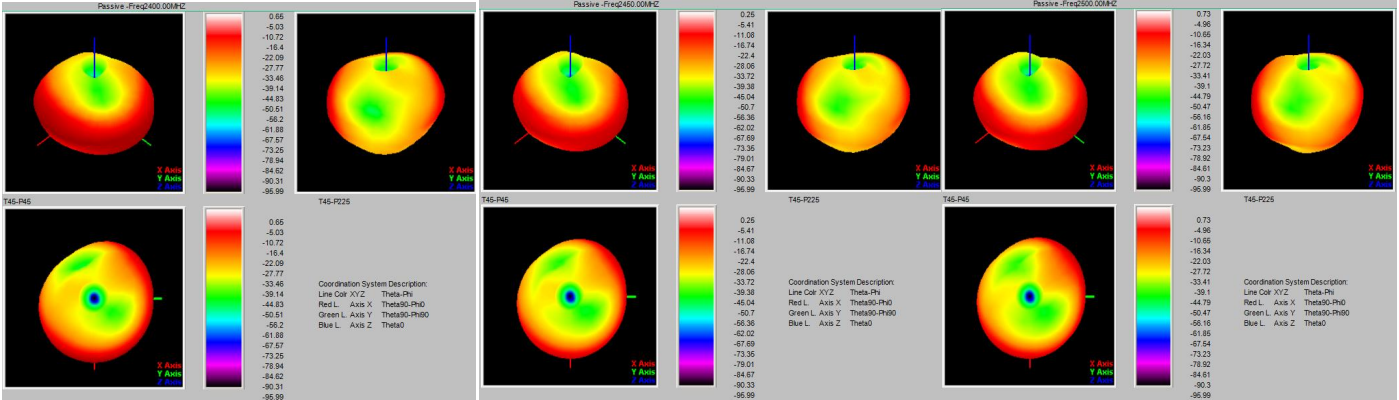


2-2 antenna effeciency

frequency 频率 (MHz)	gain 增益 (dBi)	efficiency 效率(dB)	efficiency 效率(%)
2400	1.92	-1.95	63.76
2410	2.00	-2.14	61.13
2420	1.06	-1.84	65.43
2430	1.03	-1.61	69.09
2440	1.01	-1.76	66.65
2450	1.89	-1.76	66.74
2460	1.78	-1.52	70.55
2470	1.75	-1.61	68.95
2480	1.63	-1.75	66.77
2490	1.44	-1.80	66.08
2500	1.44	-2.03	62.62

frequency 频率 (MHz)	gain 增益 (dBi)	efficiency 效率(dB)	efficiency 效率(%)
5000	2.94	-1.59	69.3
5050	2.84	-1.51	70.63
5100	2.11	-1.32	73.86
5150	2.16	-1.13	77.07
5200	2.34	-1.31	73.89
5250	2.27	-1.9	64.62
5300	2.86	-2.11	61.56
5350	2.74	-1.94	63.95
5400	3.00	-1.36	73.14
5450	2.25	-1.21	75.74
5500	2.23	-1.33	73.54
5550	2.92	-1.7	67.61
5600	2.88	-1.67	68.1
5650	2.68	-1.58	69.56
5700	2.93	-1.45	71.68
5750	2.85	-1.74	66.99
5800	2.09	-1.78	66.45
5850	2.66	-2.06	62.22
5900	2.2	-2.59	55.13
5950	2.41	-2.55	55.58
6000	2.05	-2.59	55.06

3D graph



3. Reliability test report

test item		test method	acceptance standard	Judgment results
1	V . S . W . R	Set the network analyzer parameters for testing	According to the specifications to be tested	PASS
2	Plug in damage	Set the network analyzer parameters for testing	According to the specifications to be tested	PASS
3	salt atmosphere	Temperature 35° C humidity 95% saline concentration 5%; test for 24 hours	After 2H, there was no obvious bad appearance: frequency offset of 5%	PASS
4	constant temperature and humidity	Temperature 80° C test 12H to -40° C Test 12H: Humidity 90%: Test 24 hours	After 2H, there was no obvious bad appearance: frequency offset of 5%	PASS