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FP4

天线性能测试规格书

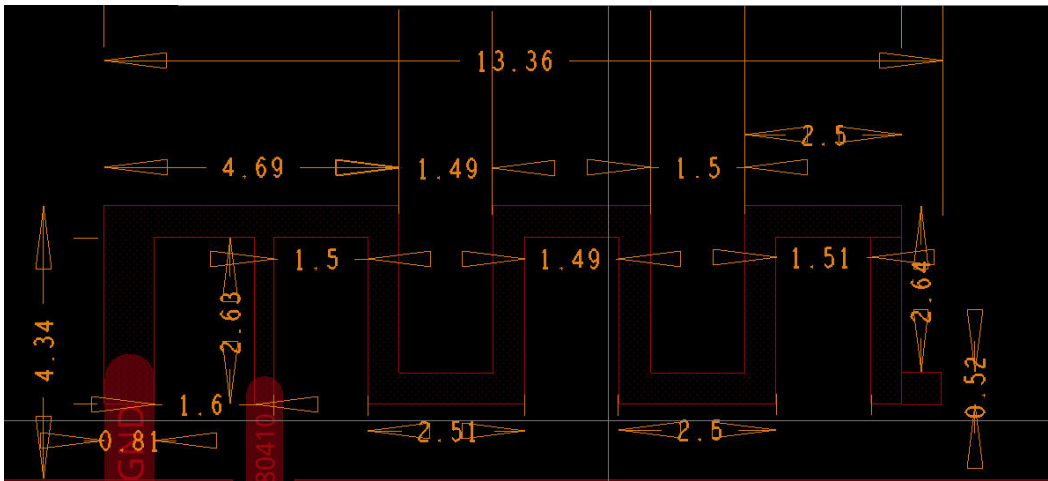
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APPLications

※Bluetooth Home RF

※ISM band 2.4GHz applications

1. Dimensions



2. Specifications

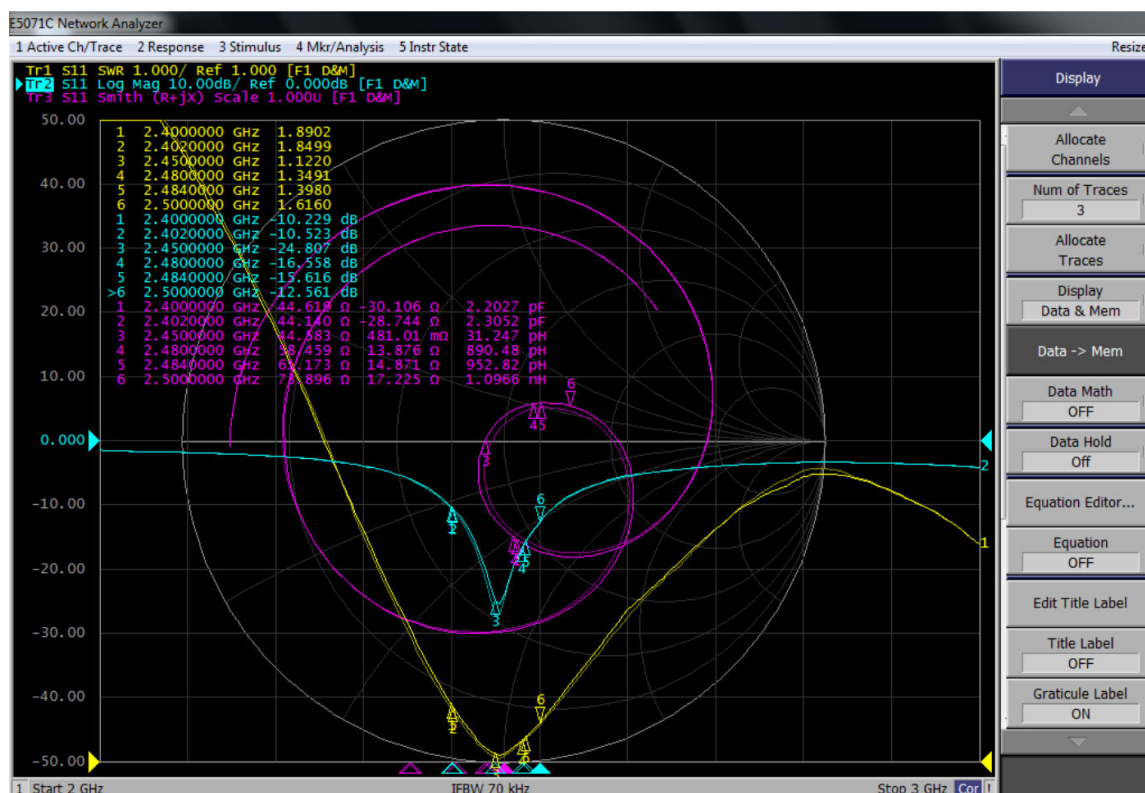
number	Item	Specifications
1	Working Central Frequency	2441 MHz
2	Band Width	(2402-2480)MHz
3	Gain	-0.86dBi
4	VSWR	≤2.0
5	Antenna type	PCB antenna

6	Azimuth Beam width	Omni - directional
7	Impedance	50 欧姆
8	Modulation mode	GFSK

3. 仪器测试

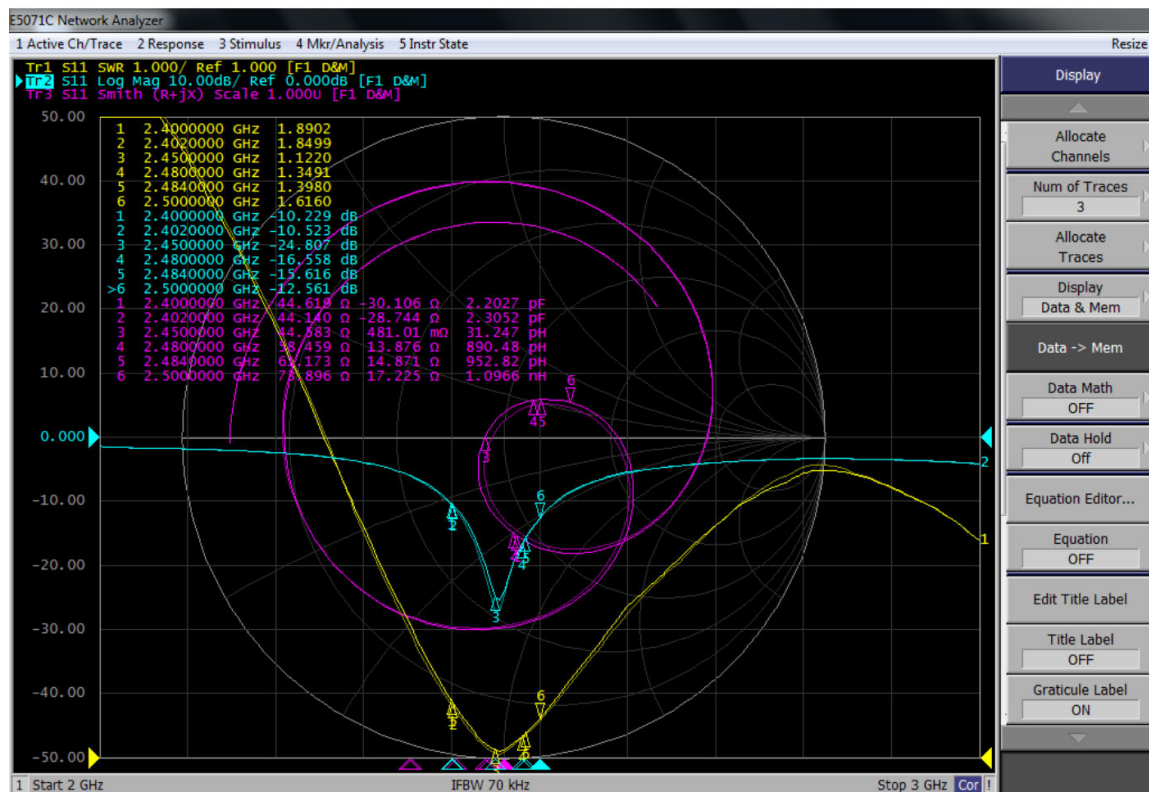
① VSWR

Mkr2: 2402MHz 1.84 Mkr3: 2450MHz 1.12 Mkr4: 2482 MHz 1.34



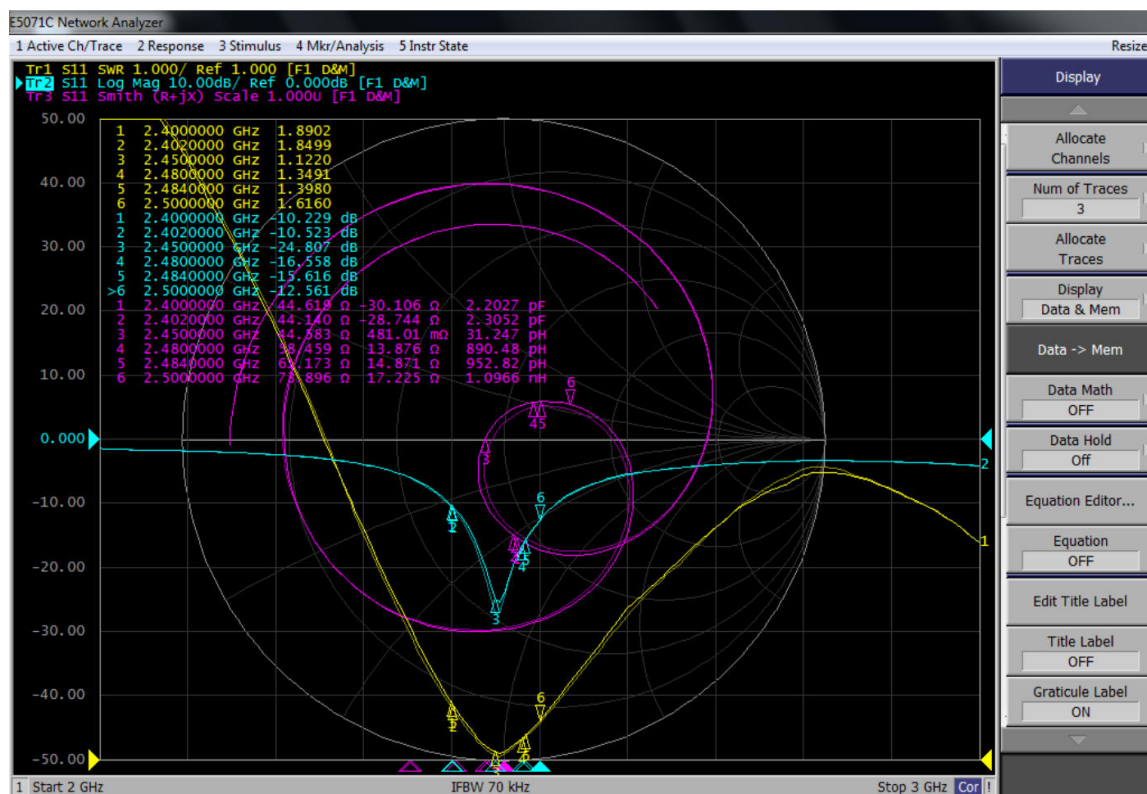
②Smith Char

Mkr2: 2402MHz 44.1 Mkr3: 2450MHz 44.5 Mkr4: 2482MHz 58.4



③Return Loss

Mkr2: 2402MHz -10.5 Mkr3: 2450MHz -24.8 Mkr4: 2482 MHz -16.5



④天线OTA汇总

1: 2402MHz -1.12

6: 2450MHz -0.72

9: 2480MHz -1.11

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Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2402.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-4.81	-4.76	-4.57	-4.65	-5.08	-4.84	-5.04	-5.38	-5.04	-5.32	-5.55
Gain (dBi)	-1.12	-0.92	-0.54	-0.45	-0.86	-0.72	-0.93	-1.41	-1.11	-1.30	-1.40
Efficiency (%)	33.06	33.41	34.90	34.24	31.07	32.84	31.32	28.94	31.34	29.37	27.86
Directivity (dB)	3.69	3.84	4.03	4.20	4.22	4.12	4.11	3.98	3.92	4.02	4.15
Peak Gain Position (Theta)	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	105.00	105.00	105.00
Peak Gain Position (Phi)	0.00	0.00	0.00	0.00	0.00	15.00	15.00	15.00	225.00	345.00	345.00
Efficiency ThetaPol (%)	19.10	19.73	21.02	20.92	18.71	19.33	18.25	17.00	18.49	17.16	16.19
Efficiency PhiPol (%)	13.95	13.68	13.88	13.32	12.36	13.51	13.06	11.94	12.84	12.21	11.66
Upper Hem. Efficiency (%)	15.20	15.04	15.38	14.76	13.10	13.57	12.76	11.60	12.38	11.44	10.77
Lower Hem. Efficiency (%)	17.86	18.37	19.52	19.49	17.97	19.27	18.56	17.34	18.96	17.92	17.08

⑤天线OTA效率

1: 2402MHz 33.06%

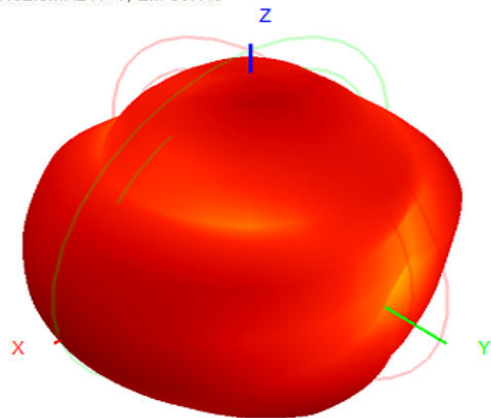
5: 2440MHz 31.07%

9: 2480MHz 31.34%

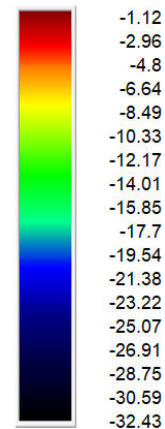
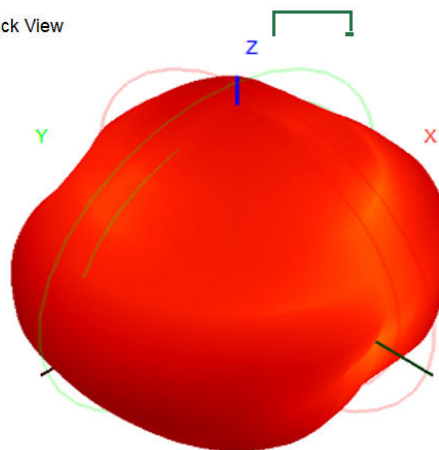


⑥ Radiation Patterns

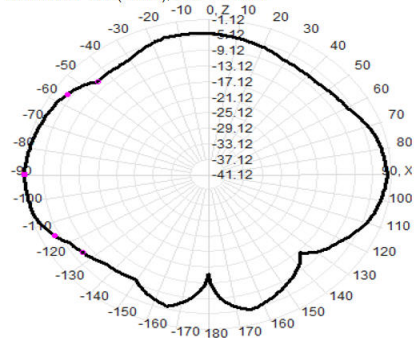
2402.0MHz H+V, Eff: 33.1%



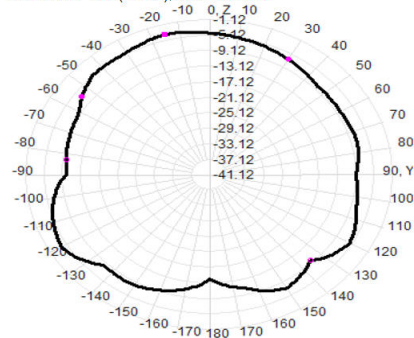
Back View



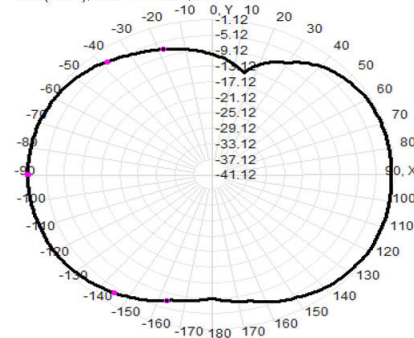
2402.0MHz Total(E1-XZ), Max=-1.12dBi



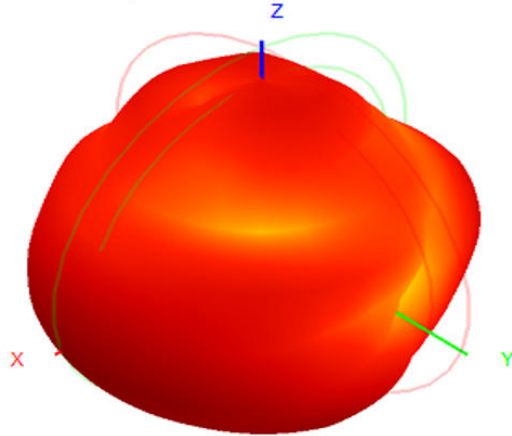
2402.0MHz Total(E2-YZ), Max=-3.69dBi



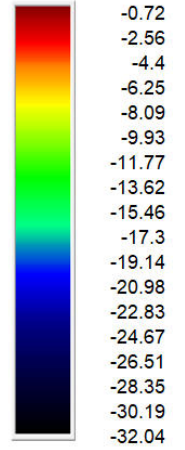
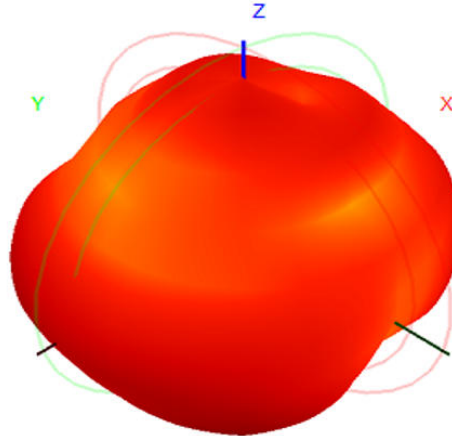
Total(H-XY), Max=-1.12dBi, CirD=12.87



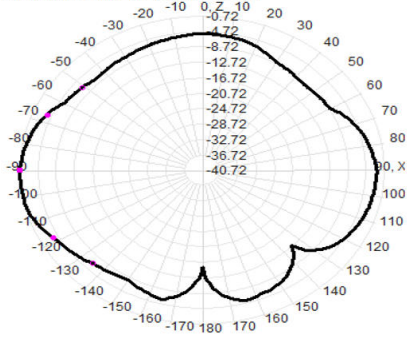
2450.0MHz H+V, Eff: 32.8%



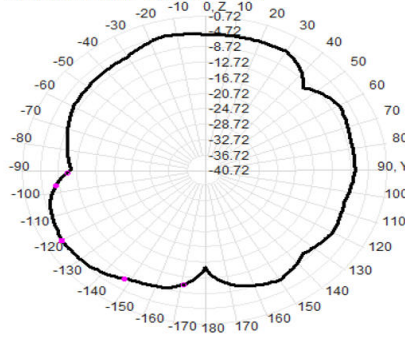
Back View



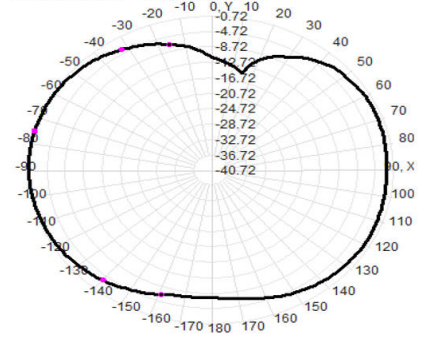
2450.0MHz Total(E1-XZ), Max= -0.73dBi



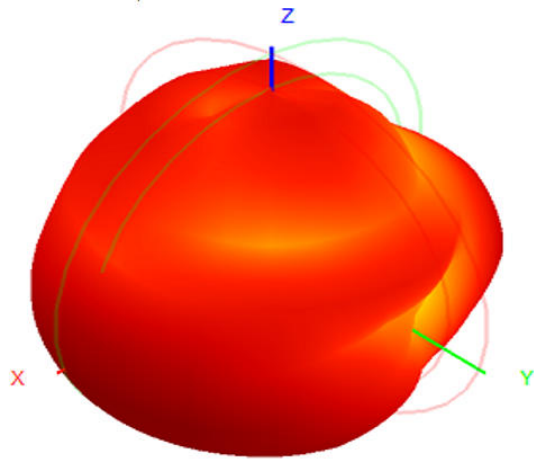
2450.0MHz Total(E2-YZ), Max= -4.66dBi



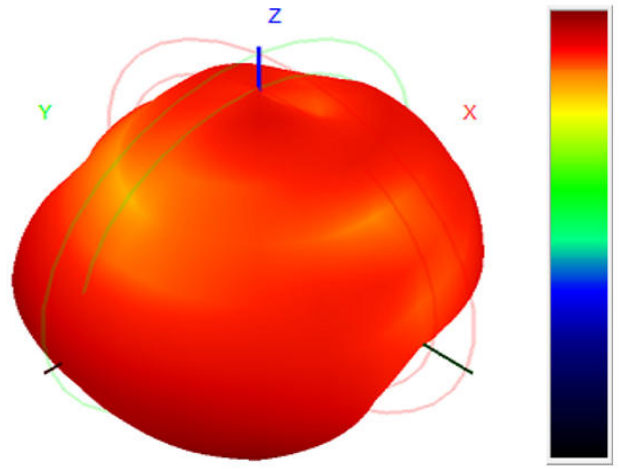
Total(H-XY), Max= -0.72dBi, CirD=13.99



2480.0MHz H+V, Eff: 31.3%

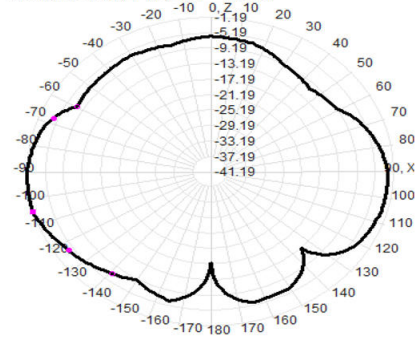


Back View

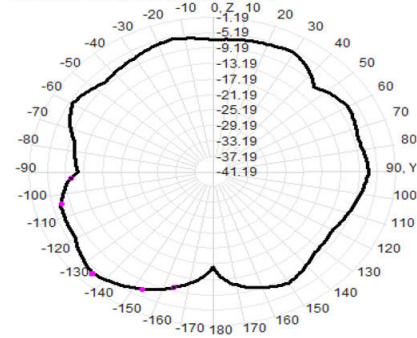


-1.11
-2.96
-4.8
-6.64
-8.48
-10.33
-12.17
-14.01
-15.85
-17.69
-19.54
-21.38
-23.22
-25.06
-26.9
-28.75
-30.59
-32.43

2480.0MHz Total(E1-XZ), Max= -1.19dBi



2480.0MHz Total(E2-YZ), Max= -4.19dBi



Total(H-XY), Max= -1.19dBi, CirD=13.13

