

ADD: Shenzhen baoan district for road no. 1 on da industry park 1 4 floor

TEL: 0755-86031011 86030933 FAX: 0755-86033315 WEB: www.shenzhenguyang.com

Product specifications acknowledgment

Recognized manufacturers: _____

Manufacturer: ShenZhen GuYang Commuication Technology Co.,Ltd.

Description: WiFi communication antenna

Product Type: WIFI 2.4/5.8G dual-band PANTONE CoolGray9U rod-shaped antenna

Supplier acknowledge signature bar

Lister	Reviewers	Approved

That customers signature bar

Reviewers	Approved

一、Product technical parameters

Main technical specifications	
Frequency Range (MHZ)	2400~2500\ 5150~5850
Impedance(Ω)	50
Gain(dBi)	≥ 5
VSWR	≤ 1.92
Admitted Power	10W
Polarization	Linear, Vertical
Connector Type	SMA
Physical Properties	
Antenna Base	TPEE
Operating Temp	-20°C~+65°C
Storage Temp	-40°C~+85°C

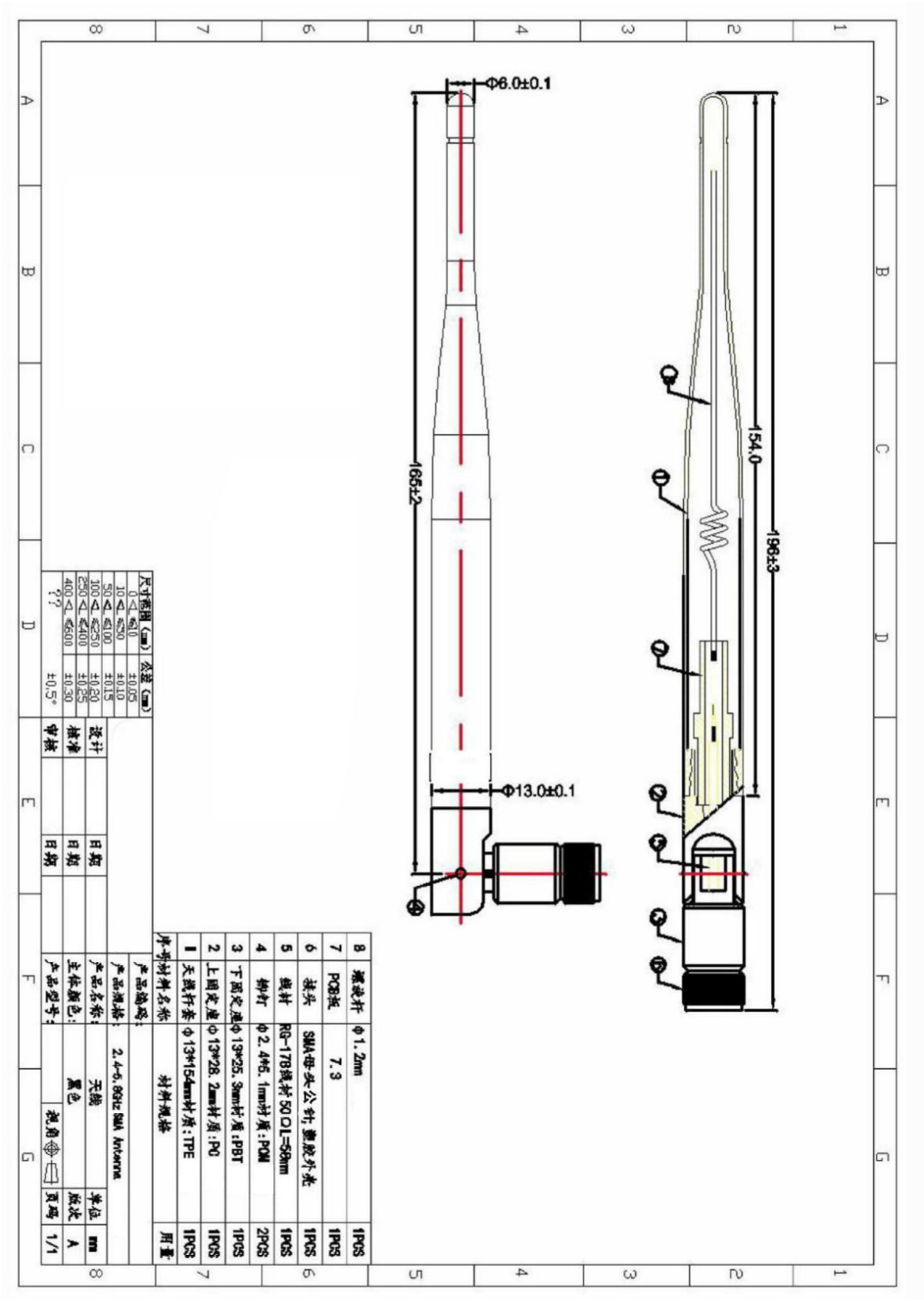
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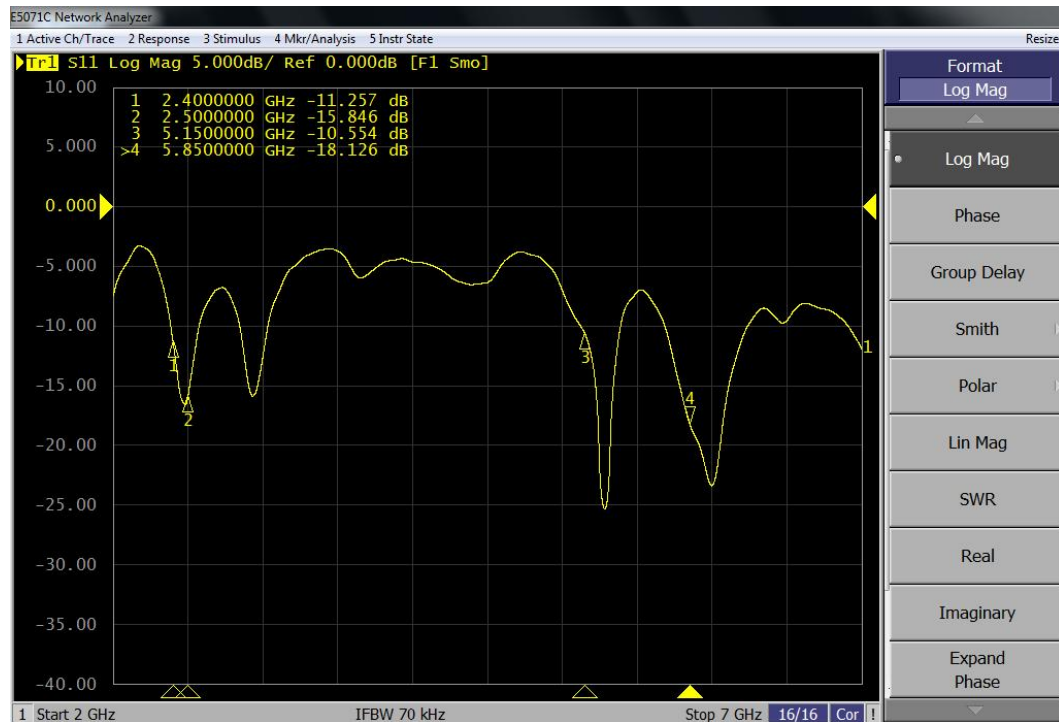
二、The finished product figure:



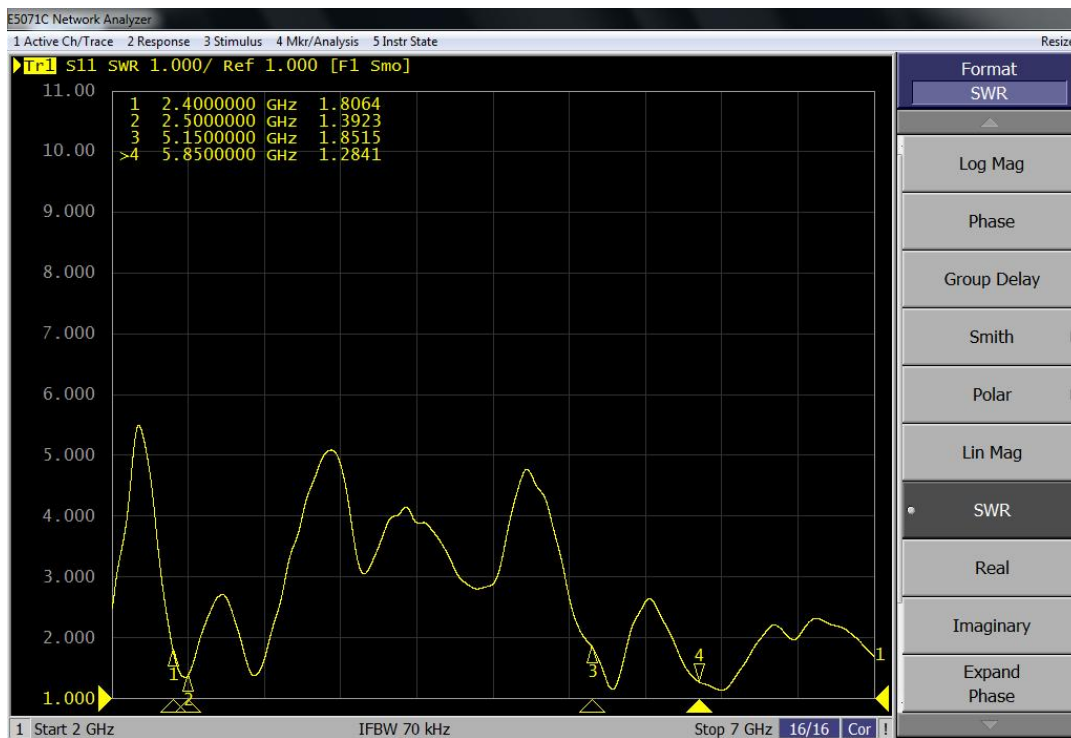
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三、The test report

3.1: Return loss



3.2: Voltage standing wave ratio



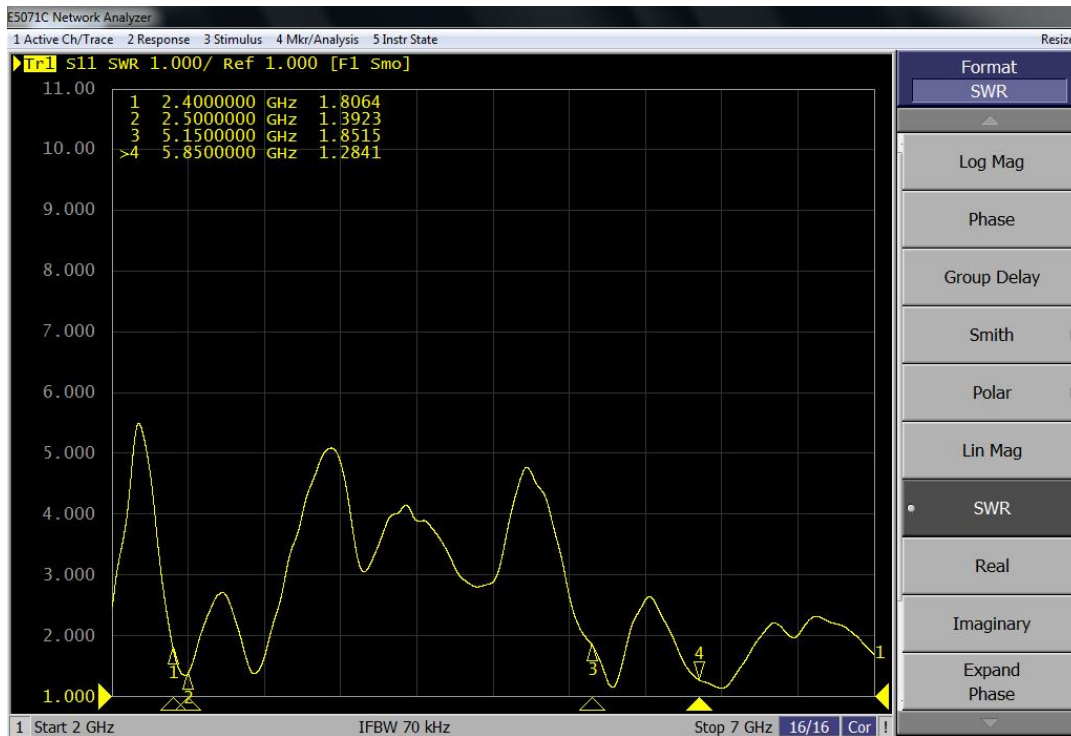
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3.3: Impedance diagram



3.4: Darkroom test data

Passive Test For 2400-2500、5150-5850								
Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	72.22	5.36	5315	89.63	4.28	5585	85.72	3.67
2405	71.97	5.38	5320	91.09	4.43	5590	83.67	3.56
2410	71.86	5.42	5325	91.1	4.43	5595	81.64	3.48
2415	73.09	5.49	5330	88.76	4.33	5600	78.73	3.13
2420	73.4	5.47	5335	88.56	4.38	5605	78.73	2.94
2425	72.9	5.37	5340	90.31	4.49	5610	78.63	2.77
2430	73.42	5.3	5345	88.8	4.35	5615	79.34	2.9
2435	75.63	5.32	5350	88.4	4.36	5620	81.76	3.19
2440	77.51	5.34	5355	87.68	4.33	5625	83.41	3.4
2445	79.01	5.28	5360	84.71	4.12	5630	85.42	3.6
2450	80.32	5.23	5365	84.85	4.12	5635	87.96	3.76
2455	80.62	5.14	5370	83.34	3.98	5640	88.34	3.86
2460	80.4	5.05	5375	81.71	3.87	5645	89.1	4.05
2465	79.58	4.96	5380	83.09	3.86	5650	89.2	4.04
2470	78.93	4.95	5385	82.16	3.79	5655	87.05	3.92
2475	79.35	5	5390	82.71	3.71	5660	84.79	3.8
2480	79.6	5.08	5395	82.93	3.72	5665	83.18	3.77
2485	81.18	5.19	5400	81.78	3.74	5670	81.23	3.78

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2490	82.38	5.29	5405	86.14	4.03	5675	78.5	3.59
2495	81.37	5.21	5410	89.24	4.24	5680	77.14	3.59
2500	81.69	5.17	5415	87.02	4.14	5685	79.28	3.83
5150	76.53	5.29	5420	84.99	3.99	5690	80.34	4.02
5155	75.24	5.22	5425	82.13	3.86	5695	81.85	4.15
5160	74.66	5.13	5430	80.36	3.87	5700	82.17	4.3
5165	76.07	5.11	5435	78.66	3.76	5705	84.48	4.49
5170	73.98	4.89	5440	73.51	3.4	5710	86.46	4.59
5175	76.55	5.03	5445	73.46	3.41	5715	86.52	4.61
5180	78.41	5.13	5450	72.78	3.22	5720	88.65	4.63
5185	77.08	4.91	5455	72.67	3.08	5725	89.97	4.67
5190	79.26	4.99	5460	73.17	3.04	5730	90.54	4.61
5195	77	4.86	5465	73.66	3.06	5735	89.67	4.55
5200	76.85	4.81	5470	74.71	3.08	5740	88.2	4.43
5205	78.63	4.85	5475	78.2	3.3	5745	85.88	4.4
5210	77.56	4.66	5480	80.53	3.41	5750	84.79	4.34
5215	76.61	4.52	5485	79.84	3.47	5755	83.69	4.35
5220	76.7	4.43	5490	80.16	3.59	5760	83.18	4.4
5225	78.99	4.51	5495	80.53	3.77	5765	82.48	4.52
5230	79.56	4.42	5500	75.99	3.67	5770	81.72	4.45
5235	81.34	4.38	5505	74.12	3.6	5775	81.36	4.47
5240	84.32	4.47	5510	74.49	3.56	5780	82.84	4.55
5245	86.55	4.52	5515	74.56	3.57	5785	84.12	4.59
5250	87.23	4.52	5520	75.38	3.65	5790	85.13	4.65
5255	86.54	4.42	5525	75.3	3.53	5795	87.78	4.77
5260	86.31	4.39	5530	76.57	3.44	5800	88.16	4.65
5265	85.69	4.32	5535	76.74	3.34	5805	89.47	4.73
5270	84.6	4.28	5540	78.01	3.39	5810	89.48	4.61
5275	83.16	4.18	5545	81.26	3.39	5815	86.64	4.44
5280	80.87	4	5550	84.17	3.52	5820	85.53	4.38
5285	80.91	3.99	5555	85.46	3.65	5825	83.06	4.26
5290	80.59	3.82	5560	86.83	3.69	5830	81.47	4.19
5295	80.63	3.78	5565	87.27	3.76	5835	80.2	4.16
5300	84.18	3.84	5570	88.26	3.77	5840	80.07	4.06
5305	86.29	4	5575	88.46	3.93	5845	79.66	4.07
5310	87.71	4.11	5580	86.11	3.74	5850	79.81	4.05

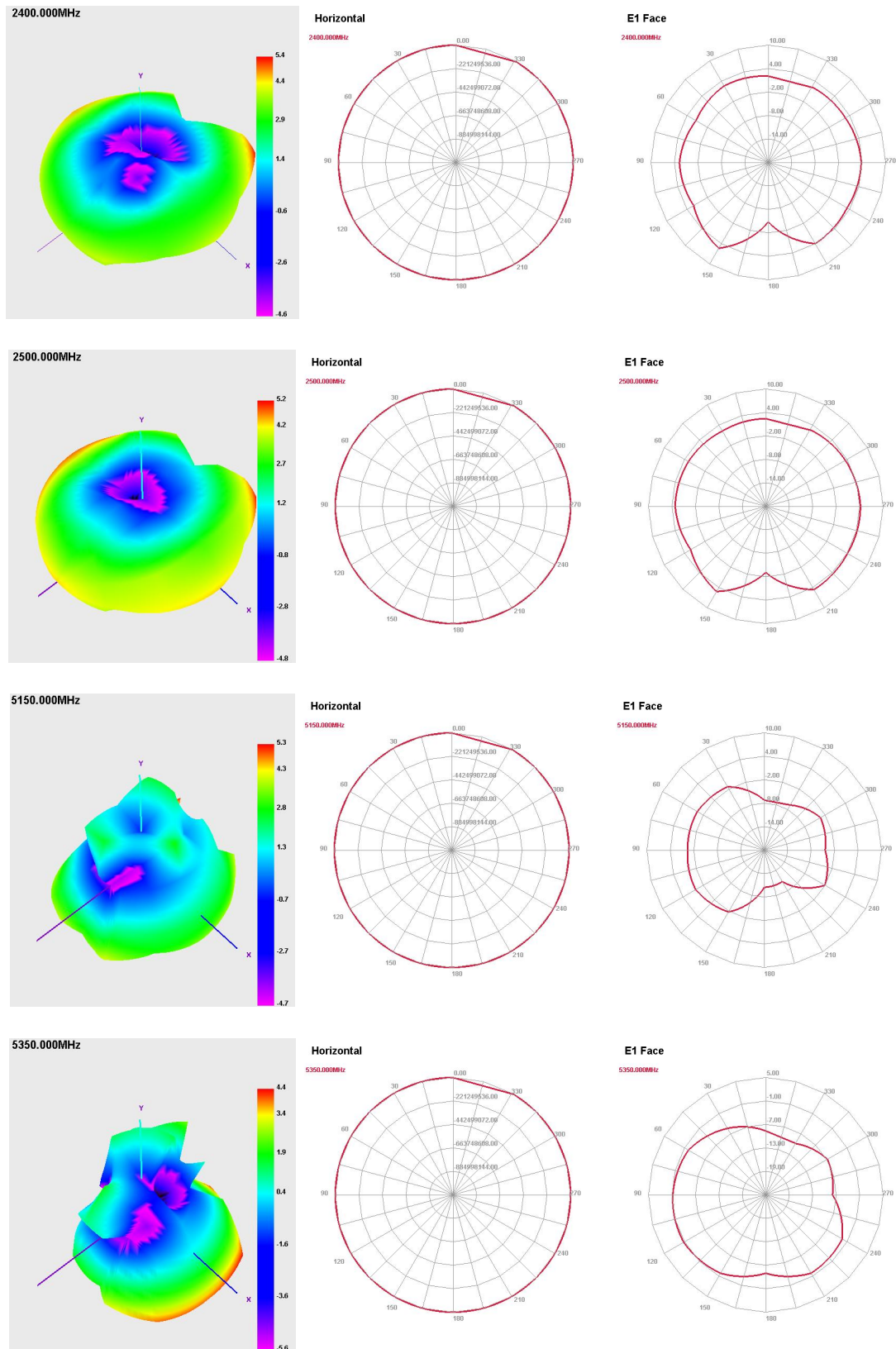
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3.5: Raditation Pattern

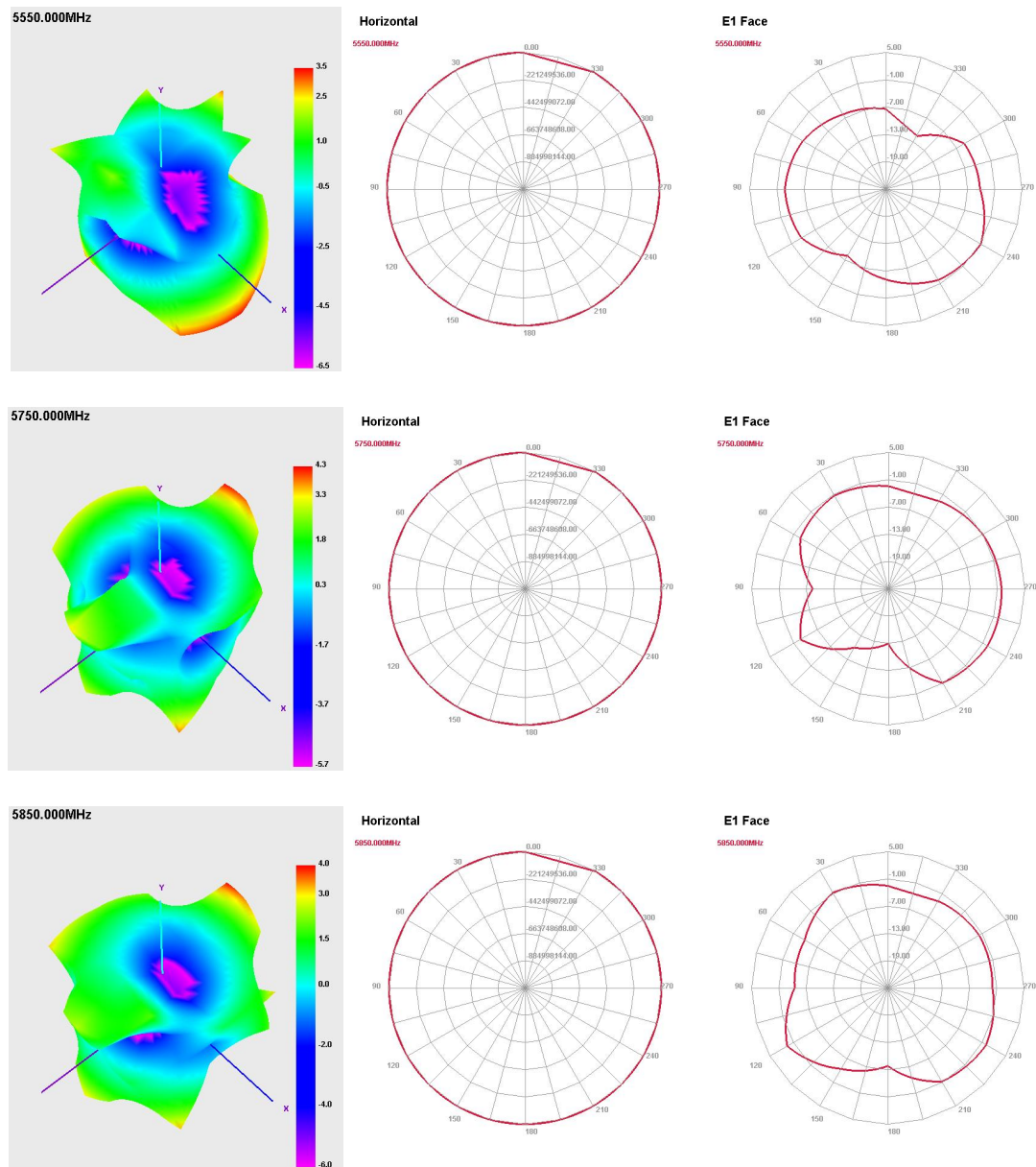


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四、Material requirements

1.Body: ■TPEE; PANTONE Cool Gray 9U
2.Upper base: ■PC; PANTONE Cool Gray 9U
3.Lower base: ■PBT; PANTONE Cool Gray 9U
4.Rivet:■POM; Black
5.Cable: ■Transparent brown RG178
6.Connector: ■SMA Female pin,PANTONE Cool Gray 9U plastic shell

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五、Visual inspection

1、Exterior color: ■PANTONE Cool Gray 9U, Cable:Transparent brown
2、Appearance Judgment Criteria: No burrs; no damage; no scratches; no color inconsistency; no inner conductor falling off, looseness and other defects.

六、Trial installation inspection

Project	Content	Tool	Test methods and criteria	Result
Assembly inspection	Assembly effect	Caliper	When assembling the antenna with the PCB, chassis, and antenna feeder, the assembly must be smooth and there must be no looseness, difficulty in installation, or failure to install in place.	OK

七、Electrical performance testing

Project	Test methods and conditions	Specifications and requirements	Result
1.Characteristic impedance	Test antenna characteristic impedance with TDR	$50\Omega \pm 10\Omega$	OK
2.VSWR	At 2.4GHz-2.5GHz, use a network analyzer to test the standing wave ratio	1.85:1 MAX	OK
3. Return loss	At 2.4GHz-2.5GHz, use a network analyzer to test return loss	-10dB MAX	OK
4. Gain	Test gain and field pattern in 2.4GHz-2.5GHz microwave anechoic chamber	Meet specifications	OK

八、Reliability test

Project	Test methods and conditions	Specifications and requirements	Result
Salt spray test	Salt water concentration 50+/-10g/l (about 5%); PH6.5-7.2; test temperature 35+/-1 degree; corrosion time 16H.	Judgment method: Use a 20x magnifying glass to observe after the test; if there is no oxidation defect, it is judged to be qualified.	OK
Vibration test	Vibration frequency 10-2000-10HZ, amplitude 1.52mm 10 times each along the XYZ direction	There is no obvious change in appearance and all electrical parameters meet the specification error.	OK
Drop test	Dropped on a wooden board from 1 meter	There is no obvious change in appearance and all electrical parameters meet the specification error.	OK

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Temperature cycle test	High temperature: 65℃ ; Low temperature: -20℃ Duration: Each temperature lasts 30 minutes Conversion time: 10minutes Cycles: 5 times Recovery Time: 4 to 6hrs	There is no obvious change in appearance and all electrical parameters meet the specification error.	OK
Constant temperature and humidity test	Temperature and humidity : 40℃ ± 2℃,90-95%RH Duration: 50hrs Recovery Time: 4 to 6hrs Detection time: 24 & 50hrs	There is no obvious change in appearance and all electrical parameters meet the specification error.	OK
High temperature test	Temperature: 85℃ Duration: 24hrs Recovery Time: 4 to 6hrs Detection time: 24 hrs	There is no obvious change in appearance and all electrical parameters meet the specification error.	OK
Low temperature test	Temperature: -40℃ Duration: 24hrs Recovery Time: 4 to 6hrs Detection time: 24 hrs	There is no obvious change in appearance and all electrical parameters meet the specification error.	OK

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