

W/G/B Antenna (2922A)

1. Explanation of Product number :

S L K - P N E - 2 9 2 2 A - M - 1 3 5 I I I - B

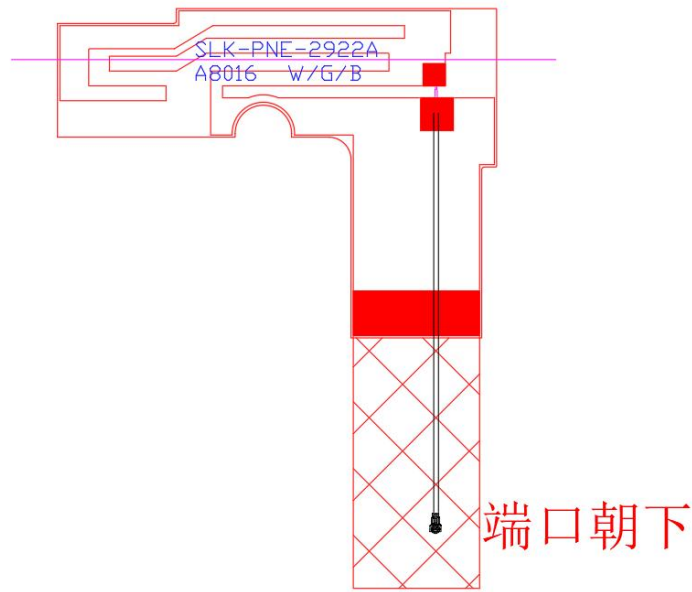
1

2

3

4

5



Product Code:

(1) Customer:

PNE:普耐尔

(2) Project:

2922A: SLK-PNE-2922A (W/G/B antenna)

(3) Welding Position

M: Middle

(4) Cable Length:

135III: 135*0.81MM 三代端子

(5) Cable Color

B: Black

2. Features

- *Stable and reliable in performances
- *Compact size
- *RoHS compliance

3. Applications

- * IEEE802.11 (a/b/g/n)
- * Hand-held devices when W/G/B (802.11a/b/g/n) functions are needed

4. Description

Holy bond's FPC antenna series are specially designed for W/G/B (802.11 a/b/g/n) applications. Based on Holy bond's proprietary design and processes, this FPC antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

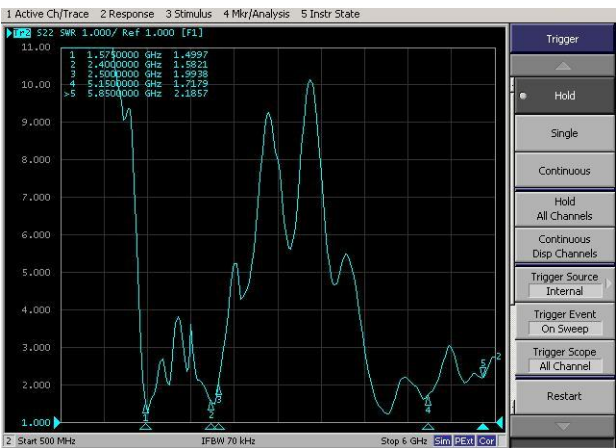
5. Electrical Specifications

5-1

Characteristics	Specifications	Unit
Outline Dimensions	29.55x22.15x 0.12	mm
Center Frequency	2.4-2.5/5.15-5.85	GHz
Bandwidth(under-10dB return loss)	130min	MHz
VSWR	3max	
Impedance	50	Ω
Polarization	Linear Polarization	

5-2.

VSWR

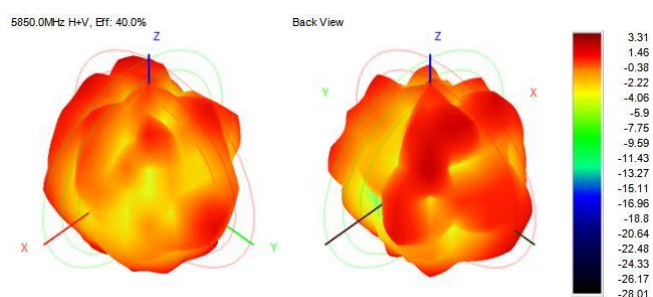
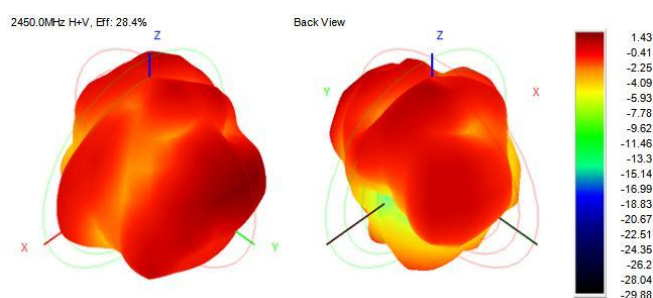
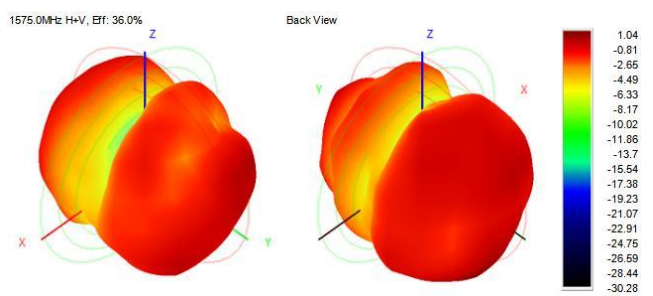


S11



5-3.WIFI+GPS Antenna Gain/Efficiency/3D DATE

Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)	Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
1570	-4.68	0.73	34.06	2400	-5.36	1.70	29.08
1571	-4.64	0.78	34.38	2410	-5.24	2.00	29.89
1572	-4.60	0.82	34.68	2420	-5.24	2.10	29.95
1573	-4.55	0.89	35.04	2430	-5.20	2.05	30.21
1574	-4.50	0.95	35.44	2440	-5.38	1.77	29.00
1575	-4.44	1.04	35.96	2450	-5.47	1.43	28.36
1576	-4.42	1.06	36.14	2460	-5.56	0.89	27.78
1577	-4.39	1.10	36.43	2470	-5.54	0.64	27.94
1578	-4.34	1.14	36.83	2480	-5.44	0.41	28.61
1579	-4.28	1.20	37.32	2490	-5.41	0.26	28.75
1580	-4.22	1.25	37.88	2500	-5.47	0.36	28.35
				5150	-5.26	0.78	29.82
				5250	-4.92	0.01	32.22
				5550	-5.76	0.60	26.52
				5750	-4.88	1.93	32.52
				5850	-3.98	3.31	39.96



5-4.WIFI throughput test

System32\cmd.exe

```

9.00 sec 11.2 MBytes 94.4 Mbits/sec
10.00 sec 10.4 MBytes 87.0 Mbits/sec
11.00-12.00 sec 10.6 MBytes 89.1 Mbits/sec
12.00-13.00 sec 12.0 MBytes 101 Mbits/sec
13.00-14.00 sec 11.5 MBytes 96.5 Mbits/sec
14.00-15.00 sec 10.4 MBytes 87.0 Mbits/sec
15.00-16.00 sec 12.9 MBytes 108 Mbits/sec
16.00-17.00 sec 12.6 MBytes 106 Mbits/sec
17.00-18.00 sec 9.88 MBytes 82.8 Mbits/sec
18.00-19.00 sec 13.4 MBytes 112 Mbits/sec
19.00-20.00 sec 12.2 MBytes 103 Mbits/sec
20.00-21.00 sec 10.5 MBytes 88.0 Mbits/sec
21.00-22.00 sec 9.75 MBytes 81.8 Mbits/sec
22.00-23.00 sec 8.75 MBytes 73.4 Mbits/sec
23.00-24.00 sec 8.75 MBytes 73.4 Mbits/sec
24.00-25.00 sec 11.0 MBytes 92.3 Mbits/sec
25.00-26.00 sec 10.0 MBytes 83.8 Mbits/sec
26.00-27.00 sec 9.62 MBytes 80.8 Mbits/sec
27.00-28.00 sec 10.9 MBytes 91.2 Mbits/sec
28.00-29.00 sec 11.6 MBytes 97.8 Mbits/sec
29.00-30.00 sec 11.0 MBytes 92.0 Mbits/sec

```

ID	Interval	Transfer	Bandwidth
4	0.00-30.00 sec	341 MBytes	95.4 Mbits/sec
4	0.00-30.00 sec	340 MBytes	95.2 Mbits/sec

iperf Done.

C:\iperf-3.1.3-win64>

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iperf

Info: 192.168.0.102, unknown said: 02:00:00:00:00:00

Server listening on 5201

Accepted connection from 192.168.0.100 port 5201 connected to 192.168.0.100 port 50438

ID	Interval	Transfer	Bandwidth
5	0.00-1.00 sec	11.4 MBytes	95.4 Mbits/sec
5	1.00-2.00 sec	14.0 MBytes	118 Mbits/sec
5	2.00-3.00 sec	8.07 MBytes	67.7 Mbits/sec
5	3.00-4.00 sec	11.3 MBytes	95.0 Mbits/sec
5	4.00-5.00 sec	11.2 MBytes	93.9 Mbits/sec
5	5.00-6.00 sec	14.0 MBytes	118 Mbits/sec
5	6.00-7.00 sec	12.1 MBytes	101 Mbits/sec
5	7.00-8.00 sec	12.3 MBytes	103 Mbits/sec
5	8.00-9.00 sec	12.8 MBytes	107 Mbits/sec
5	9.00-10.00 sec	10.1 MBytes	84.6 Mbits/sec
5	10.00-11.00 sec	10.4 MBytes	87.2 Mbits/sec
5	11.00-12.00 sec	7.38 MBytes	61.0 Mbits/sec
5	12.00-13.00 sec	4.43 MBytes	37.1 Mbits/sec
5	13.00-14.00 sec	7.83 MBytes	65.7 Mbits/sec
5	14.00-15.00 sec	10.0 MBytes	84.1 Mbits/sec
5	15.00-16.00 sec	11.4 MBytes	95.4 Mbits/sec
5	16.00-17.00 sec	11.9 MBytes	99.5 Mbits/sec
5	17.00-18.00 sec	5.44 MBytes	45.6 Mbits/sec
5	18.00-19.00 sec	12.8 MBytes	107 Mbits/sec
5	19.00-20.00 sec	12.5 MBytes	104 Mbits/sec
5	20.00-21.00 sec	11.7 MBytes	97.8 Mbits/sec
5	21.00-22.00 sec	5.76 MBytes	48.3 Mbits/sec
5	22.00-23.00 sec	2.84 MBytes	23.9 Mbits/sec
5	23.00-24.00 sec	2.17 MBytes	18.2 Mbits/sec
5	24.00-25.00 sec	3.50 MBytes	32.7 Mbits/sec
5	25.00-26.00 sec	7.59 MBytes	63.6 Mbits/sec
5	26.00-27.00 sec	10.6 MBytes	88.7 Mbits/sec
5	27.00-28.00 sec	11.1 MBytes	93.1 Mbits/sec
5	28.00-29.00 sec	10.3 MBytes	81.1 Mbits/sec
5	29.00-30.00 sec	11.9 MBytes	99.8 Mbits/sec
5	30.00-30.01 sec	144 KBytes	99.6 Mbits/sec

ID	Interval	Transfer	Bandwidth
5	0.00-30.01 sec	0.00 Bytes	0.00 bits/sec
5	0.00-30.01 sec	290 MBytes	80.9 Mbits/sec

Sender listening on 5201

sender receiver

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System32\cmd.exe

```

9.00 sec 39.6 MBytes 333 Mbits/sec
10.01 sec 39.9 MBytes 332 Mbits/sec
11.00-12.01 sec 40.6 MBytes 342 Mbits/sec
12.01-13.00 sec 39.5 MBytes 330 Mbits/sec
13.00-14.00 sec 40.8 MBytes 343 Mbits/sec
14.00-15.01 sec 40.0 MBytes 336 Mbits/sec
15.01-16.01 sec 39.8 MBytes 332 Mbits/sec
16.01-17.01 sec 40.4 MBytes 339 Mbits/sec
17.01-18.01 sec 40.1 MBytes 336 Mbits/sec
18.01-19.00 sec 40.4 MBytes 339 Mbits/sec
19.00-20.00 sec 40.0 MBytes 338 Mbits/sec
20.00-21.00 sec 40.8 MBytes 342 Mbits/sec
21.00-22.00 sec 39.8 MBytes 335 Mbits/sec
22.00-23.00 sec 40.2 MBytes 337 Mbits/sec
23.00-24.00 sec 40.0 MBytes 335 Mbits/sec
24.00-25.00 sec 39.4 MBytes 330 Mbits/sec
25.00-26.00 sec 40.4 MBytes 340 Mbits/sec
26.00-27.00 sec 40.2 MBytes 337 Mbits/sec
27.00-28.01 sec 40.2 MBytes 337 Mbits/sec
28.01-29.01 sec 40.0 MBytes 335 Mbits/sec
29.01-30.00 sec 39.8 MBytes 335 Mbits/sec

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ID	Interval	Transfer	Bandwidth
4	0.00-30.00 sec	1.17 GBytes	336 Mbits/sec
4	0.00-30.00 sec	1.17 GBytes	336 Mbits/sec

iperf Done.

C:\iperf-3.1.3-win64>

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Info: 192.168.0.102, unknown said: 02:00:00:00:00:00

Server listening on 5201

Accepted connection from 192.168.0.100 port 54496

ID	Interval	Transfer	Bandwidth
5	0.00-1.00 sec	27.8 MBytes	233 Mbits/sec
5	1.00-2.00 sec	31.4 MBytes	264 Mbits/sec
5	2.00-3.00 sec	27.1 MBytes	228 Mbits/sec
5	3.00-4.00 sec	26.1 MBytes	219 Mbits/sec
5	4.00-5.00 sec	27.6 MBytes	231 Mbits/sec
5	5.00-6.00 sec	28.2 MBytes	236 Mbits/sec
5	6.00-7.01 sec	30.9 MBytes	257 Mbits/sec
5	7.01-8.00 sec	27.3 MBytes	231 Mbits/sec
5	8.00-9.00 sec	25.7 MBytes	215 Mbits/sec
5	9.00-10.00 sec	27.4 MBytes	230 Mbits/sec
5	10.00-11.00 sec	27.0 MBytes	226 Mbits/sec
5	11.00-12.00 sec	27.4 MBytes	230 Mbits/sec
5	12.00-13.00 sec	27.0 MBytes	226 Mbits/sec
5	13.00-14.00 sec	26.9 MBytes	226 Mbits/sec
5	14.00-15.00 sec	27.4 MBytes	230 Mbits/sec
5	15.00-16.01 sec	27.1 MBytes	226 Mbits/sec
5	16.01-17.00 sec	26.5 MBytes	223 Mbits/sec
5	17.00-18.00 sec	26.3 MBytes	220 Mbits/sec
5	18.00-19.00 sec	27.1 MBytes	227 Mbits/sec
5	19.00-20.00 sec	28.2 MBytes	237 Mbits/sec
5	20.00-21.00 sec	27.0 MBytes	226 Mbits/sec
5	21.00-22.00 sec	28.3 MBytes	237 Mbits/sec
5	22.00-23.00 sec	29.8 MBytes	250 Mbits/sec
5	23.00-24.00 sec	25.6 MBytes	215 Mbits/sec
5	24.00-25.00 sec	26.6 MBytes	223 Mbits/sec
5	25.00-26.00 sec	26.5 MBytes	222 Mbits/sec
5	26.00-27.00 sec	27.7 MBytes	232 Mbits/sec
5	27.00-28.00 sec	27.6 MBytes	231 Mbits/sec
5	28.00-29.00 sec	29.6 MBytes	249 Mbits/sec
5	29.00-30.00 sec	28.1 MBytes	235 Mbits/sec
5	30.00-30.01 sec	0.00 Bytes	0.00 bits/sec

ID	Interval	Transfer	Bandwidth
5	0.00-30.01 sec	827 MBytes	231 Mbits/sec
5	0.00-30.01 sec	0.00 Bytes	0.00 bits/sec

Sender listening on 5201

sender receiver

5G吞吐量测试-10米上传

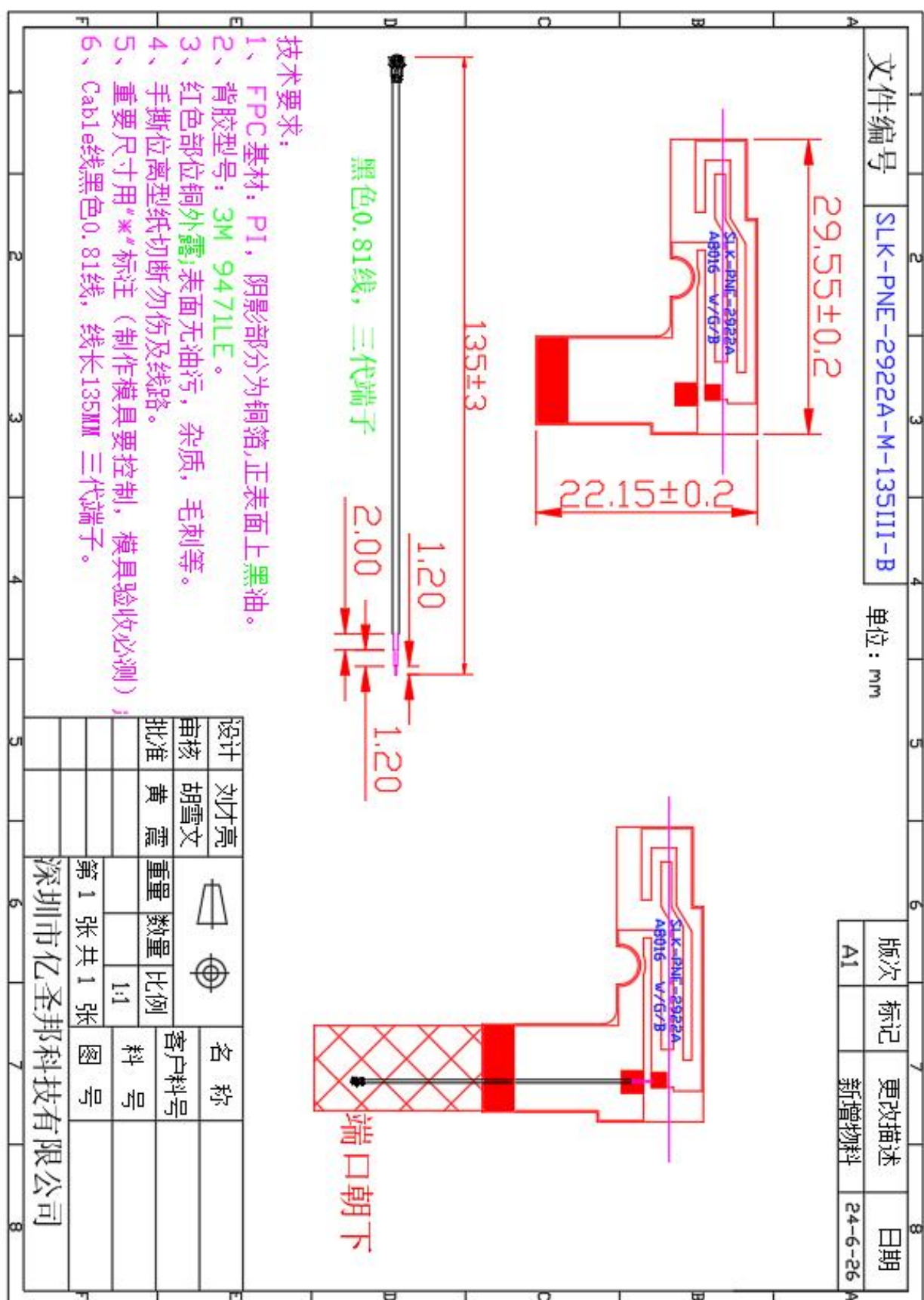
5-5.WIFI active test

WIFI有源测试			
频段	1	6	11
B-TRP-11MBps	10.45	10.07	11.36
B-TIS-11MBps	-79.43	-80.13	-80.41
G-TRP-54MBps	9.64	10.17	10.42
G-TIS-54MBps	-69.00	-69.84	-69.65
N-TRP-MCS7	9.12	9.98	10.06
N-TIS-MCS7	-65.88	-65.49	-65.77
频段	36	149	165
A-TRP-54MBps	9.97	10.85	10.58
A-TIS-54MBps	-72.33	-70.56	-72.22

5-6.GPS practical Test



6. Antenna Dimensions (unit: mm)



7. Antenna Picture

