尚远科技（中国）有限公司

Sunnyway Technology (China) Co. Ltd.

Antenna Specification

Customer name：PAX	Entry name：A960	
Working frequency band: WCDMA B2/B4/B5 LTE B2/B4/B5/B12/B13/B17		
Sunnyway Material specification		
Antenna type	**Product name**	**Customer number**
Monopole	**SZ22603IB75-1**	**200212000000504**
Customer name：PAX	Entry name：A960	
Working frequency band: GPS(1575.42MHZ)/2.4G 11B/11G/11N WIFI（2412MHz~2472MHz） 5G 11A/11N/11AC WIFI（5150MHz~5850MHz）		
Sunnyway Material specification		
Antenna type	**Product name**	**Customer number**
Monopole	**SZ22521IB75-2**	**200212000000490**

Change of Resume			
To compile/Date of change	**Contents Changed**	**Contents of person**	**version**
2022.12.02	A new edition	Chen min	A

1. S11 test

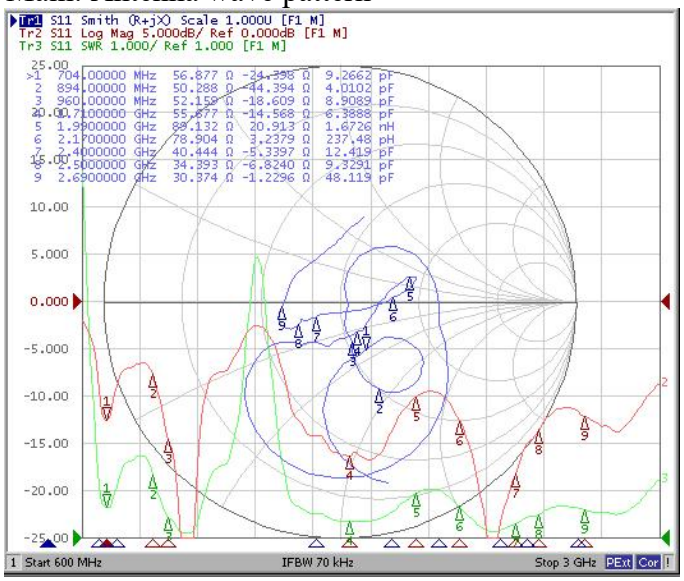
1.0 S11 test method instructions

Test equipment：LNA(Agilent E5071B)

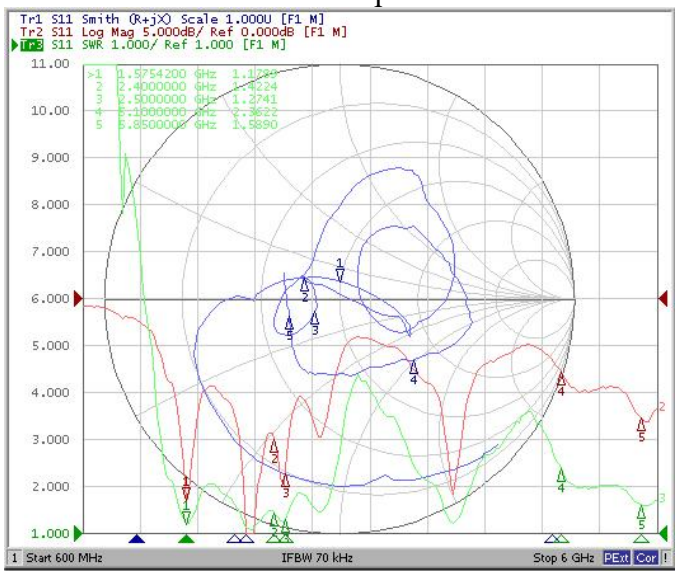
Test method：With a 50 ohm CABLE ,CABLE export from instrument testing port ， After the calibration with calibration Key, connected to the SMA connector， Records the return loss and VSWR of the related frequency points.

1.1 S11parameter

Main: Antenna wave pattern



Three in one: Antenna wave pattern



3 CHAMBER TEST DATA

Test equipment

Test system: chamber

Test environment: the temperature of 22 ℃ + 3 ℃, humidity of 50% plus or minus 15%

Test equipment: to test passive status, use Agilent 5071C to test active status, use CMW500

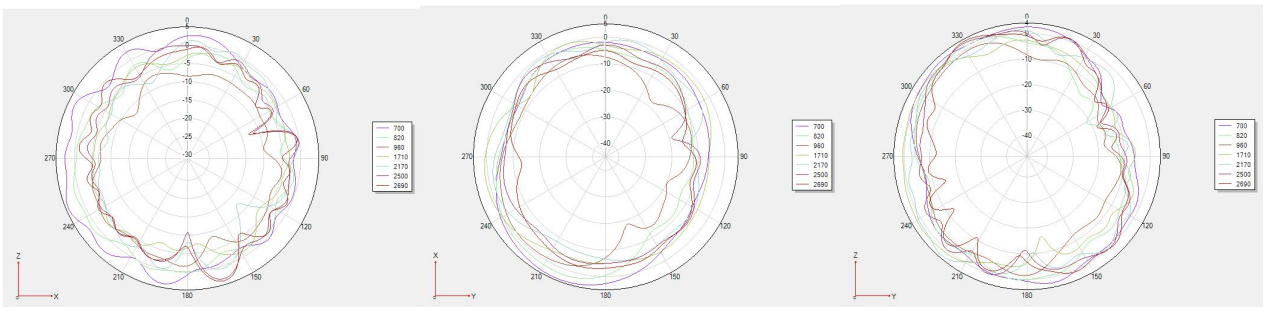
OTA Test data

Band	WCDMA 1900			Band	FDD Band2 (10M)			Band	FDD Band12 (10M)		
Chanel[DL]	9662	9800	9938	Chanel[DL]	18650	18900	19150	Chanel[DL]	23060	23095	23130
TRP	18.8	19.2	19.4	TRP	19.1	19.2	19.4	TRP	19.4	19.3	19.5
TIS			-107.5	TIS			-94.2	TIS			-95.6
Band	WCDMA 1700			Band	FDD Band4 (10M)			Band	FDD Band13 (10M)		
Chanel[DL]	1537	1638	1738	Chanel[DL]	20000	20175	20350	Chanel[DL]	23200	23230	23260
TRP	19.2	18.7	18.9	TRP	18.6	18.5	18.4	TRP	18.5	18.8	18.7
TIS			-108.8	TIS			-94.5	TIS			-93.6
Band	WCDMA 850			Band	FDD Band5 (10M)			Band	FDD Band17 (10M)		
Chanel[DL]	4357	4410	4458	Chanel[DL]	20450	20525	20600	Chanel[DL]	23780	23790	23800
TRP	19.3	19.2	19.4	TRP	19.6	19.4	19.5	TRP	19.5	19.7	19.8
TIS			-104.3	TIS			-93.7	TIS			-95.8

Main: Efficiency and gain

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	1970	44.16	2.41	2360	46.67	4.42	2650	42.76	4.64
						1980	42.46	2.23	2370	44.77	4.28	2660	41.78	4.55
700	45.61	2.07	1700	42.36	2.03	1990	43.65	2.48	2380	45.39	4.11	2670	40.74	4.1
710	46.31	2.08	1710	41.59	1.86	2000	42.66	2.19	2390	45.08	3.85	2680	42.17	4.21
720	44.18	2.35	1720	43.45	2.09	2010	43.05	2.4	2400	45.71	3.79	2690	42.46	4.68
730	45.64	2.15	1730	40.83	1.95	2020	41.88	2.18	2410	46.77	3.9	2700	44.77	4.54
740	46.99	2.69	1740	42.76	2.06	2030	42.76	2.27	2420	44.98	3.99			
750	47.31	2.29	1750	40.83	2.05	2040	41.5	2.15	2430	47.86	4.19			
760	46.4	1.95	1760	42.17	2.39	2050	43.85	2.5	2440	45.6	4.39			
770	48.68	2.06	1770	39.81	2.21	2060	44.26	2.03	2450	46.13	4.61			
780	48.93	2.17	1780	43.65	2.4	2070	44.57	2.14	2460	46.13	4.41			
790	50.62	2.06	1790	44.26	2.19	2080	41.59	1.87	2470	46.67	4.51			
800	51.29	2.24	1800	44.46	2.36	2090	41.98	2.08	2480	46.03	4.31			
810	50.58	2.86	1810	42.17	2.1	2100	40.09	2.02	2490	49.55	4.41			
820	51.06	2.76	1820	43.55	2.8	2110	41.11	2.06	2500	45.39	4.48			
830	49.54	2.65	1830	42.27	2.58	2120	41.11	2.03	2510	46.03	4.47			
840	53.33	2.86	1840	43.65	2.85	2130	43.25	2.09	2520	43.95	4.32			
850	51.25	2.82	1850	44.26	2.33	2140	43.35	2.08	2530	45.92	4.56			
860	51.68	2.56	1860	43.35	2.69	2150	41.69	2.25	2540	44.77	4.26			
870	53.72	2.24	1870	45.6	2.39	2160	40.64	2.18	2550	46.03	4.24			
880	49.12	1.92	1880	43.65	2.67	2170	40.09	2.45	2560	44.87	4.27			
890	51.95	1.85	1890	44.06	2.26	2180	39.63	2.47	2570	44.67	4.39			
900	52.79	1.99	1900	43.85	2.78	2190	41.98	2.52	2580	44.06	4.36			
910	53.88	1.63	1910	44.57	2.66	2200	41.98	4.95	2590	44.26	4.42			
920	47.75	2.28	1920	44.16	2.72	2210	41.21	4.98	2600	43.65	4.27			
930	48.94	2.46	1930	47.21	2.32	2220	42.07	4.77	2610	45.6	4.52			
940	50.53	2.59	1940	43.55	2.55	2230	41.4	5.16	2620	46.34	4.51			
950	51.88	2.15	1950	43.75	2.29	2240	41.4	4.68	2630	46.13	4.57			
960	49.32	2.21	1960	41.5	2.37	2350	46.56	4.23	2640	43.85	4.53			

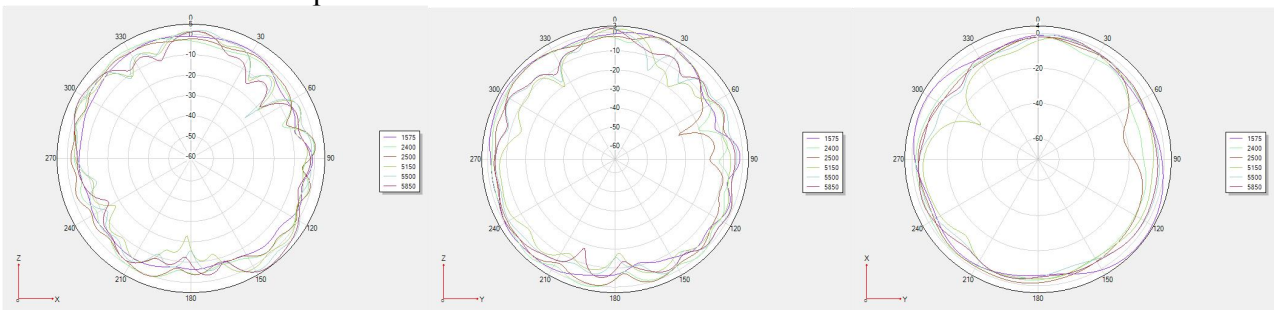
Main; Radiation pattern



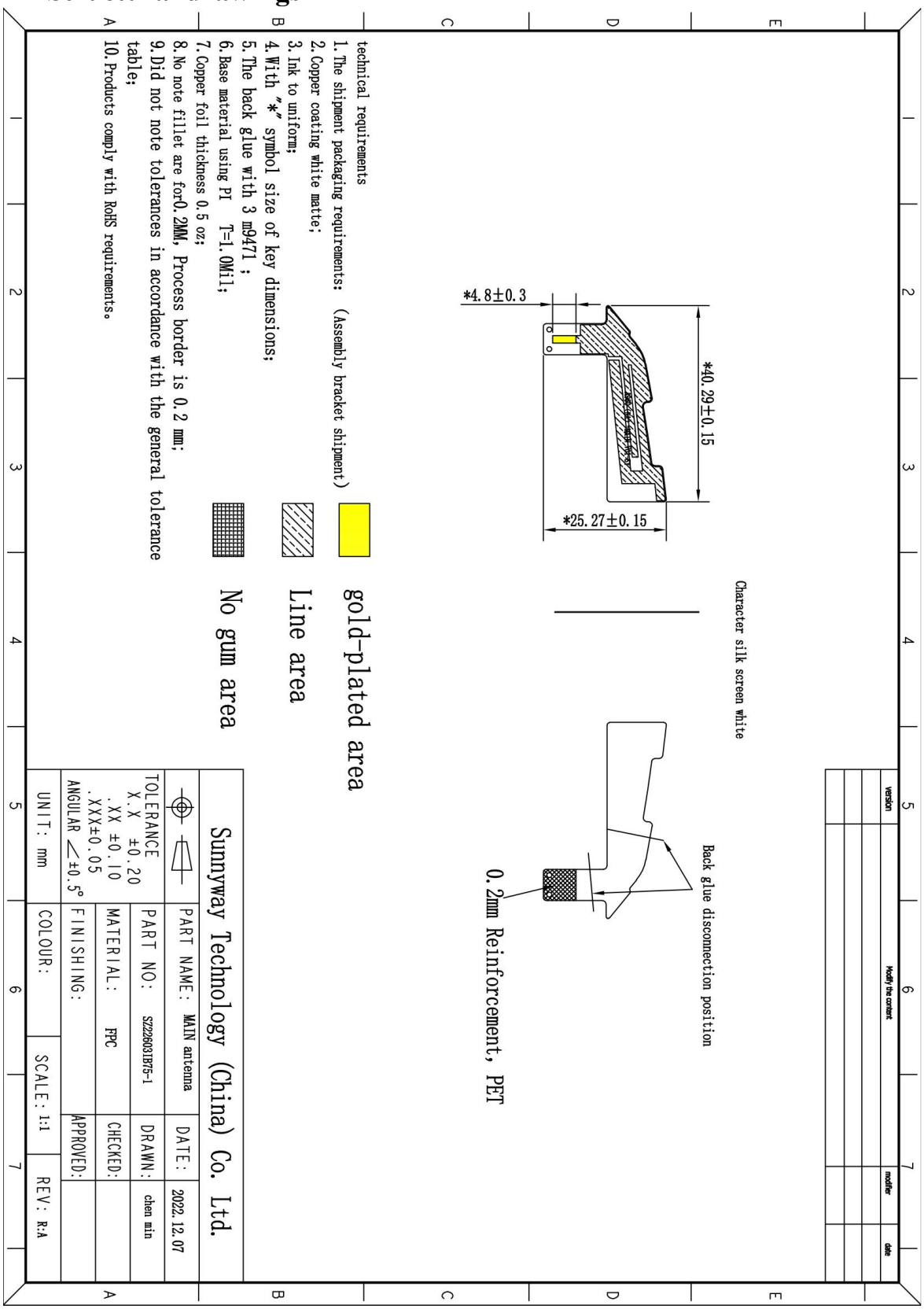
Three in one: Efficiency and gain

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)			
1550	42.66	1.15	2400	44.57	1.37	5150	39.65	1.43	5510	40.41	1.5
1555	42.56	1.42	2410	43.45	1.47	5170	38.38	1.03	5530	39.51	1.53
1560	43.25	1.61	2420	44.46	1.33	5190	39.79	1.59	5550	40.9	1.44
1565	42.95	1.93	2430	44.16	1.43	5210	39.31	1.7	5570	41.99	1.26
1570	43.05	2.19	2440	43.25	0.98	5230	39.11	1.5	5590	41.77	1.6
1575	42.17	2.31	2450	42.95	1.22	5250	39.38	1.66	5610	40.27	1.51
1580	43.75	2.32	2460	43.74	0.91	5270	40.62	1.6	5630	40.48	1.72
1585	44.06	2.36	2470	42.85	1.43	5290	39.99	1.41	5650	40.13	1.68
1590	45.29	2.42	2480	42.78	1.55	5310	38.97	1.69	5670	40.27	1.93
1595	45.81	2.36	2490	42.21	1.95	5330	39.17	1.69	5690	41.19	1.8
1600	46.56	2.49	2500	42.08	1.84	5350	38.91	1.64	5710	39.92	1.39
1605	46.45	2.16				5370	38.71	1.75	5730	41.48	1.33
1610	47.53	2.84				5390	40.48	1.45	5750	40.27	1.98
1615	45.66	2.66				5410	41.12	1.14	5770	39.92	1.82
1620	44.55	2.89				5430	41.7	1.03	5790	39.79	1.83
						5450	40.62	1.64	5810	40.27	1.94
						5470	40.62	1.46	5830	39.79	1.69
						5490	39.99	1.46	5850	41.41	1.25

Three in one: Radiation pattern

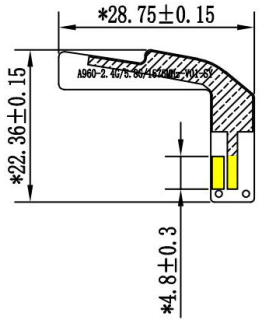


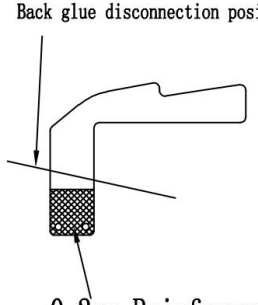
4 Structural drawings



version	Modify the content	modifier	date

Character silk screen white





technical requirements

1. The shipment packaging requirements: (Assembly bracket shipment)
2. Copper coating white matte;
3. Ink to uniform;
4. With "*" symbol size of key dimensions;
5. The back glue with 3 m9471 ;
6. Base material using PI T=1.0Mil;
7. Copper foil thickness 0.5 oz;
8. No note fillet are for0.2MM, Process border is 0.2 mm;
9. Did not note tolerances in accordance with the general tolerance table;
10. Products comply with RoHS requirements。

gold-plated area

Line area

No gum area

Sunnyway Technology (China) Co. Ltd.			
	PART NAME: GWB antenna	DATE:	2022.12.07
TOLERANCE X.X ±0.20 .XX ±0.10 .XXX±0.05 ANGULAR ∠ ±0.5°	PART NO: SZ22521IB75-2	DRAWN:	chen min
	MATERIAL: FPC	CHECKED:	
	FINISHING:	APPROVED:	
UNIT: mm	COLOUR:	SCALE: 1:1	REV: R:A