



深圳市博格斯通信技术有限公司
shenzhen bogesi communication technology co.,ltd

Product Specification

Customer: Fibocom Wireless Inc.

Customer code: 09.0018.00.00.01

Specification : 5G External antenna with rubber cover

Manufacturer code: GHT-018A (RA version)

Manufacturer: Shenzhen Bogesi Communication Technology Co.,Ltd

Recognition date: July 14, 2020

Supplier Sign and Seal	Customer Sign and Seal

Supplier contact address: Room 601, Saiba building, Langshan 2Rd, Nanshan , Shenzhen, China
Contact person of supplier's business tel/fax: 0755-86525983/0755-86539353
Supplier technical support contact/phone: Liang Deliu/18988799010



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Scope of application:

It is applicable to the 5G external rubber sleeve antenna

Scope of application:

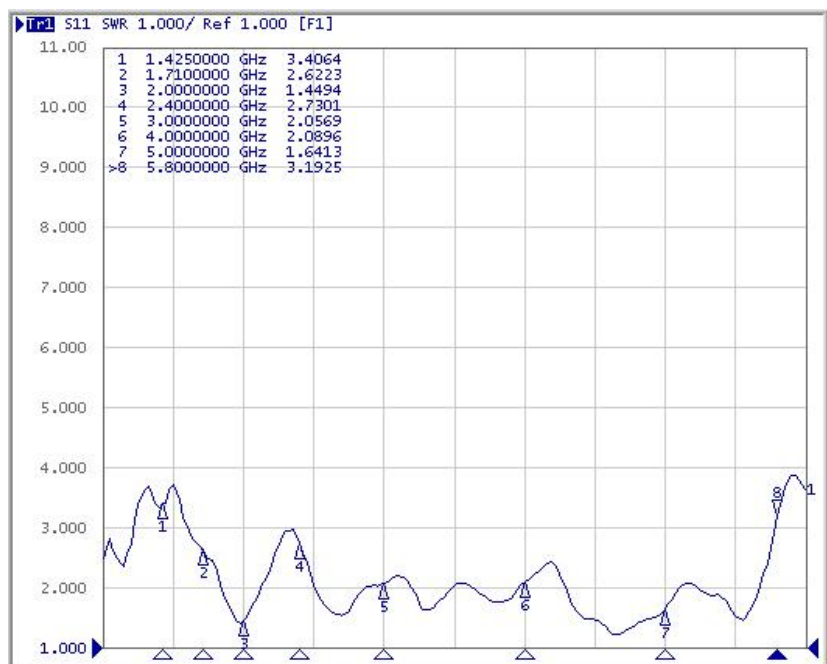
Frequency band	1425-6000MHz	The antenna material	ABS
Input impedance	50 Ω	Plastic material	Plastic cap:ABS
VSWR	≤ 3.0		Adapters1: ABS
polarization	Linear polarization		Adapters2:ABS
Operating temperature	- 40 °C ~ + 65 °C	RF line specifications	RG-178
Storage temperature	- 40 °C ~ + 80 °C	Connector specifications	SMA Male J
Connector torque test	200 ~ 1000 g.cm	Connector tensile test	SMA $\geq$ 3 Kg
Peak gain	1425-1700MHz:2.5dBi	Connector torque test	200 ~ 1000 g.cm
	1710-2700MHz:3dBi		
	2710-6000MHz:5.3dBi		

Test conditions and methods:

Test instruments	Test method	Test result
Microwave darkroom far-field test system Aglient E5071B network analyzer	1. Assemble the antenna to be tested on the prototype to do passive test fixture 2. Place the passive fixture on the test fixture in the dark room and establish connection with the network analyzer 3. Test antenna passive data with test software	Refer to the sample test report below

Test data:

Standing wave diagram

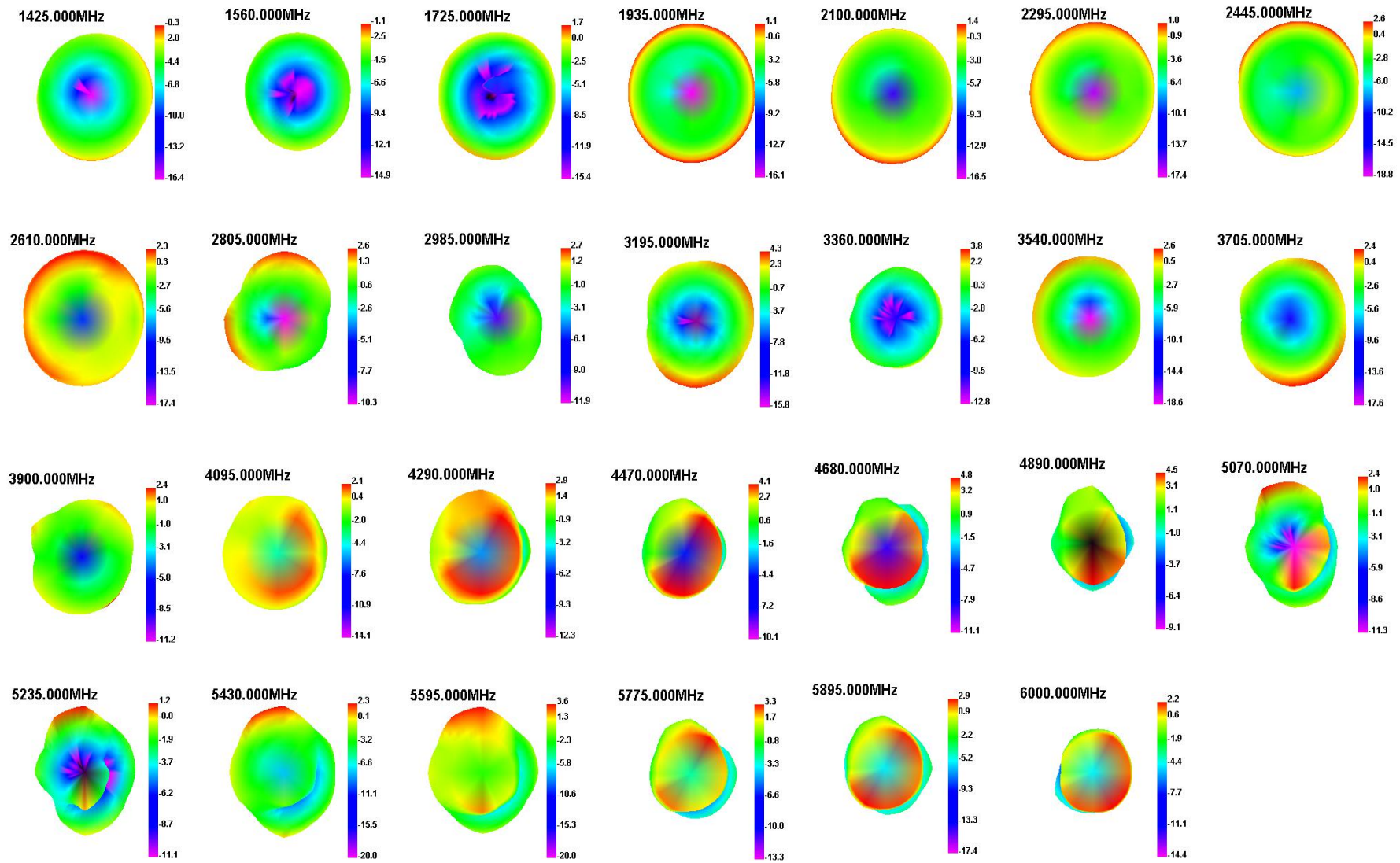


2. Passive efficiency

Passive Test For 1425-6000														
Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
1425	40.59	-0.35	1890	65.12	2.16	2355	65.37	2.19	2820	79.25	2.6	3285	80.34	4.14
1440	40.84	-0.98	1905	70.03	1.87	2370	63.19	2.09	2835	76.79	2.46	3300	78.28	3.9
1455	40.27	-1.3	1920	71.16	1.82	2385	63.03	1.65	2850	77.77	2.6	3315	76.75	3.75
1470	39.33	-1.92	1935	71.92	1.12	2400	60.17	1.8	2865	79.54	3.22	3330	76.34	3.83
1485	38.56	-2.16	1950	74.32	1.37	2415	61.4	2.82	2880	78.92	2.5	3345	75.25	3.91
1500	42.01	-0.99	1965	74.11	2.09	2430	58.38	2.28	2895	78.4	2.09	3360	71.58	3.83
1515	40.03	-0.9	1980	70.07	1.27	2445	59.87	2.57	2910	77.92	2.43	3375	66.34	3.36
1530	40.93	-1.1	1995	74.38	1.47	2460	59.29	2.62	2925	75.28	2.59	3390	64.35	3.36
1545	40.06	-1.27	2010	76.85	1.88	2475	58.7	2.56	2940	73.4	2.42	3405	59.47	2.81
1560	41.09	-1.1	2025	77.38	1.79	2490	61.41	3.1	2955	71.76	2.43	3420	56.41	1.94
1575	42.66	-0.82	2040	78.78	1.82	2505	64.85	2.81	2970	73.45	2.71	3435	55.51	1.45
1590	47.88	-0.01	2055	76.84	1.36	2520	66.13	2.72	2985	68.9	2.68	3450	56.66	0.81
1605	45.21	-0.05	2070	74.63	1.79	2535	70.49	2.98	3000	66.77	2.75	3465	55.34	0.34
1620	49.67	0.33	2085	72.09	1.71	2550	71.4	2.58	3015	66.31	2.72	3480	56.2	0.95
1635	55.29	0.79	2100	69.87	1.45	2565	71.21	2.82	3030	68.73	2.78	3495	58.54	1.77
1650	60.93	1.41	2115	70.17	2.27	2580	72.49	2.01	3045	67.71	2.6	3510	57.8	1.91
1665	63.04	2.47	2130	69.16	1.39	2595	75.13	2.59	3060	69.89	1.41	3525	58.88	2.37
1680	65.68	2.52	2145	67.96	1.32	2610	75.23	2.26	3075	68.11	2.81	3540	59.65	2.61
1695	62.56	2.26	2160	65.92	1.2	2625	74.15	2.18	3090	67.38	3.02	3555	58.37	2.38
1710	60.07	2.13	2175	64.41	1.16	2640	72.62	2.6	3105	70.74	3.3	3570	59.98	2.23
1725	57.56	1.75	2190	62.5	1.75	2655	75.73	2.27	3120	74.89	3.47	3585	60.89	2.28
1740	59.58	2.14	2205	58.51	1.3	2670	74.2	2.53	3135	76.07	3.66	3600	63.85	2.65
1755	59.49	2.33	2220	60.37	1.54	2685	75.47	2.29	3150	77.18	3.75	3615	67.05	2.95
1770	57.69	2.32	2235	58.13	1.3	2700	73.34	1.75	3165	78.75	3.71	3630	63.86	2.71
1785	52.94	1.92	2250	60.9	0.72	2715	75.62	2.23	3180	79.06	3.89	3645	64.45	2.57
1800	50.61	1.61	2265	62.82	1.26	2730	77.09	2.6	3195	80.75	4.31	3660	66.48	3.22
1815	58.03	2.14	2280	61.71	0.81	2745	78.76	2.59	3210	80.68	4.34	3675	69.53	3.6
1830	54.16	1.88	2295	61.42	0.96	2760	78.57	2.61	3225	81.87	4.53	3690	70.37	2.84
1845	58.82	2.27	2310	65.86	1.65	2775	81.74	2.78	3240	79.09	4.32	3705	66.85	2.39
1860	61.81	2.31	2325	66.11	1.83	2790	79.99	2.11	3255	80.16	4.59	3720	70.88	2.84
1875	61.01	1.97	2340	67.4	2.58	2805	81.08	2.62	3270	81.51	4.28	3735	70.05	2.26

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
3750	68.52	1.94	4215	75.16	2.72	4680	84.88	4.83	5145	63.14	2.02	5610	74.04	4.21
3765	66.37	1.81	4230	77.95	2.95	4695	83.63	4.79	5160	63.42	2.01	5625	72.46	3.98
3780	69.16	2.4	4245	82.22	3.34	4710	87.69	4.68	5175	59.14	1.43	5640	73.38	3.55
3795	65.88	2.34	4260	79.24	3.16	4725	89.68	4.98	5190	57.22	1.37	5655	70.24	3.23
3810	61.14	2.13	4275	71.87	2.51	4740	90.35	5.05	5205	58.32	1.76	5670	73.46	3.24
3825	62.89	2.15	4290	81.03	2.94	4755	87.97	4.71	5220	60.53	2.05	5685	70.58	3.31
3840	68.21	2.35	4305	85.82	3.35	4770	87.94	4.59	5235	50.27	1.23	5700	68.46	3.45
3855	70.67	2.38	4320	85.66	3.43	4785	86.64	4.62	5250	53.03	0.93	5715	67.47	3.58
3870	69.9	2.23	4335	86.17	2.96	4800	90.22	5.11	5265	55	1.69	5730	65.49	3.14
3885	73.39	2.55	4350	83.43	3.2	4815	91.04	5.32	5280	51.48	1.5	5745	68.41	3.08
3900	72.49	2.38	4365	86.3	3.57	4830	90.66	5.24	5295	51.09	1.65	5760	68.99	3.34
3915	71.25	2.12	4380	88.56	3.72	4845	87.46	4.73	5310	56.31	2.22	5775	65.77	3.34
3930	66.78	1.86	4395	84.44	3.59	4860	85.52	4.83	5325	52.66	1.85	5790	66.41	3.97
3945	65.65	1.94	4410	82.92	3.72	4875	82.92	4.44	5340	54.05	2.35	5805	64.95	3.44
3960	64.38	2.05	4425	82.51	4.34	4890	83.79	4.5	5355	54.13	2.54	5820	60.38	2.79
3975	67.71	2.37	4440	85.23	4.48	4905	82.37	4.23	5370	60.63	3.19	5835	58	2.18
3990	68.02	2.37	4455	84.02	4.24	4920	82.19	3.98	5385	57.04	2.97	5850	57.89	2.55
4005	65.04	2.01	4470	80.44	4.09	4935	80.9	3.66	5400	54.43	2.6	5865	60.57	3.83
4020	66.92	2.05	4485	76.37	4.09	4950	78.21	3.49	5415	53.1	3.23	5880	58.56	3.26
4035	68.39	2.29	4500	75.54	4.01	4965	82.06	3.9	5430	55.62	2.34	5895	62.7	2.92
4050	69.99	2.62	4515	77.92	4.1	4980	75.85	3.79	5445	57.59	2.77	5910	65.55	3.97
4065	69.01	2.51	4530	70.62	3.54	4995	77.98	3.9	5460	60.31	3.28	5925	63.77	3.63
4080	73.38	2.48	4545	75.83	3.85	5010	76.11	3.57	5475	62.72	3.45	5940	60.15	3.31
4095	70.68	2.06	4560	81.37	4.61	5025	73.43	3.11	5490	63.66	3.34	5955	57.45	-0.39
4110	69.74	1.86	4575	85.11	4.41	5040	75.43	2.97	5505	62.37	2.6	5970	55.85	2.85
4125	65.32	1.58	4590	87.91	4.31	5055	69.33	2.47	5520	65.07	3.18	5985	54.31	2.89
4140	70.08	2.44	4605	85.28	4.03	5070	69.76	2.36	5535	65.95	3.19	6000	48.47	2.23
4155	75.71	3.1	4620	83.81	4.63	5085	67.61	2.5	5550	69.34	3.34			
4170	77.87	3.11	4635	81.02	4.59	5100	63.54	1.98	5565	69.9	3.87			
4185	75.55	2.76	4650	84.87	4.87	5115	60.45	1.91	5580	69.88	3.41			
4200	79.23	2.87	4665	82.52	4.84	5130	64.78	1.54	5595	72.73	3.63			

3. Direction map

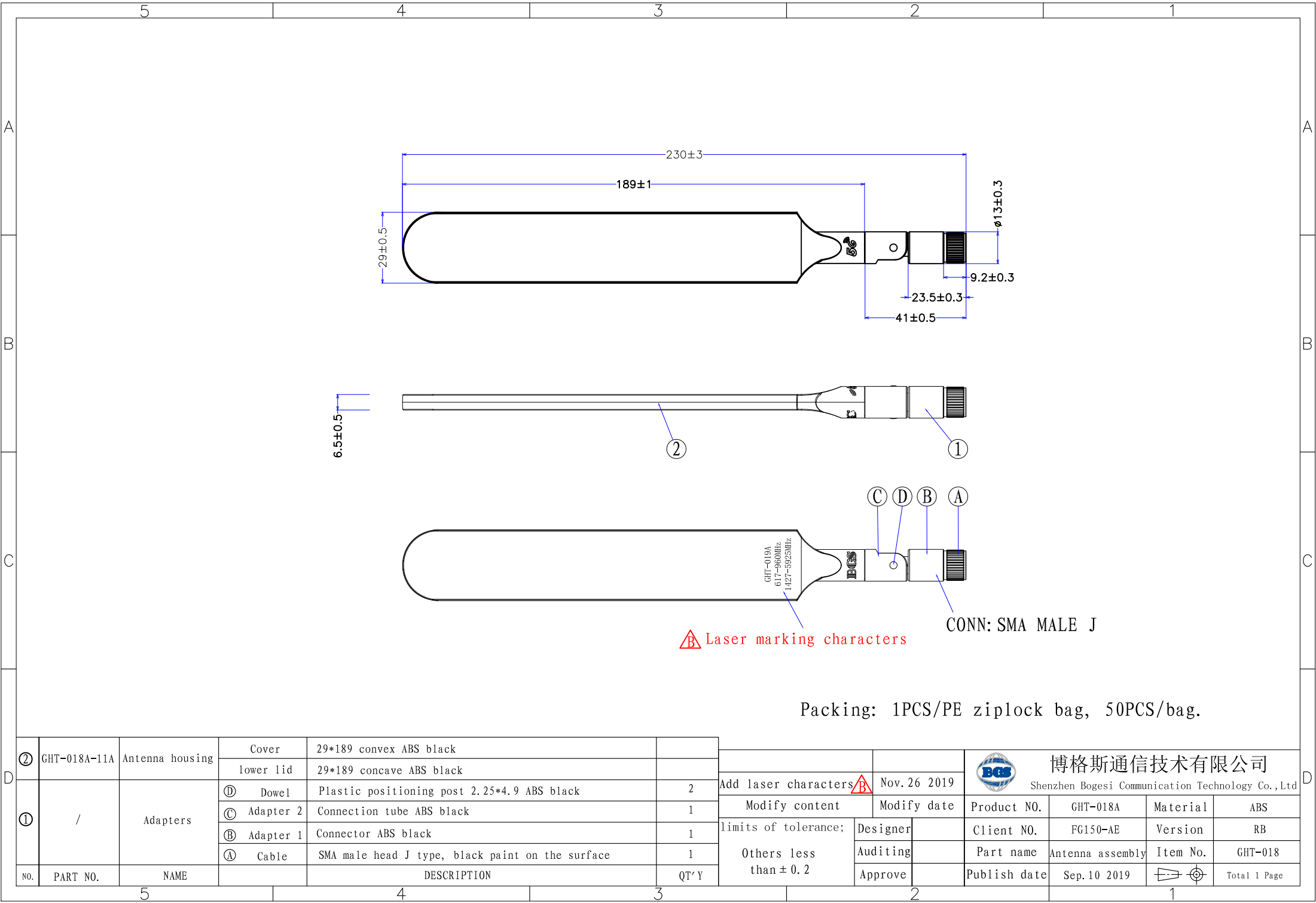




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Sample Pictures:





Packing: 1PCS/PE ziplock bag, 50PCS/bag.

②	GHT-018A-11A	Antenna housing	Cover	29*189 convex ABS black		Nov.26 2019 博格斯通信技术有限公司 Shenzhen Bogesi Communication Technology Co.,Ltd			
			lower lid	29*189 concave ABS black					
①	/	Adapters	④ Dowel	Plastic positioning post 2.25*4.9 ABS black	2	Add laser characters ① Nov.26 2019			
			③ Adapter 2	Connection tube ABS black	1	Modify content Modify date			
			② Adapter 1	Connector ABS black	1	limits of tolerance; Designer			
			① Cable	SMA male head J type, black paint on the surface	1	Auditing			
No.	PART NO.	NAME		DESCRIPTION	QT'Y	Others less than ± 0.2 Approve			
						Product NO.		GHT-018A	Material
						Client NO.		FG150-AE	Version
						Part name		Antenna assembly	Item No.
						Publish date		Sep.10 2019	Total 1 Page



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Antenna packaging instructions

一、Package size: Carton packaging

Front view:



side view:



二、Inner packaging (1PCS/PE ziplock bag, 50PCS/bag, the size of the packaging bag depends on the product size)





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Product Material Composition Declaration Table

Product		5G External antenna with rubber cover	Product number		GHT-018A			Recognition date:		2020/7/14	
Company (seal)		Shenzhen Bogesi Communication Technology Co.,Ltd	Contacter		Zhou Xuebing			Telephone		0755-86083452	
Number	Component	Material	The amount of RoHS restricted substances in homogeneous materials (ppm)						Test report code	Test date	
			Cd	Pb	Hg	Cr+6	PBB	PBDE			
1	FPC	Flexible copper clad laminate	ND	ND	ND	ND	ND	ND	SHAEC2001939104	2020/3/2	
2		Printing ink	ND	ND	ND	ND	ND	ND	CE/2019/A0149	2019/10/14	
3		3M-9471	ND	ND	ND	ND	ND	ND	CANEC1925631401	2019/12/27	
4	Shell	POLYLAC PA-777D	ND	ND	ND	ND	ND	ND	238113368s9 001	2019/12/9	
5		Color Masterbatch	ND	ND	ND	ND	ND	ND	CANEC2002421701	2020/3/16	
6	Connector	Polyoxymethylene	ND	ND	ND	ND	ND	ND	KF/2019/C0704	2019/12/19	
7		PTFE TUBE	ND	10	ND	ND	ND	ND	CANEC1921892217	2019/10/15	
8		Brass rod	4	28764	ND	ND	ND	ND	CANEC2006659601	2020/5/15	
9		Gold-plated layer	ND	ND	ND	ND	ND	ND	SZXEC2000574802	2020/4/2	
10		Nickel plating	ND	ND	ND	ND	ND	ND	SZXEC2000574801	2020/4/2	
11		Toner	ND	ND	ND	ND	ND	ND	A2200046406101002	2020/3/16	
12	Cable	FEP	ND	ND	ND	ND	ND	ND	SHAEC2001149401	2020/1/21	
13		Fluoroplastic FEP	ND	ND	ND	ND	ND	ND	A219022715410101E	2019/9/3	
14		Silver-plated copper wire	ND	ND	ND	ND	ND	ND	SHAEC1928362919	2020/1/6	

Formulated by: Liang Jinghua

Auditor: Liang Deliu

Description:

The material analysis expansion table is similar to our company's model BOM, which describes the composition of each material provided by the supplier, and then conducts RoHS control on each composition (or the supplier must conduct RoHS compliance management on his supplier) , Provide proof of testing for every third party).

A complete material analysis expansion table, which includes:

- 1 Material development table: component composition decomposition
- 2 Third-party verification report of each component