



Internal Antenna Product Specification

Project Name: 4G-LTE External Antenna

Part Number: SAA30968A

VENDOR NAME: Shanghai Saintenna Electronic Technology Co., Ltd.

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Rev	Change Summary	Date	Author
1.0	Preliminary Release	2014-07-26	Kevin Cui

PREPARED BY

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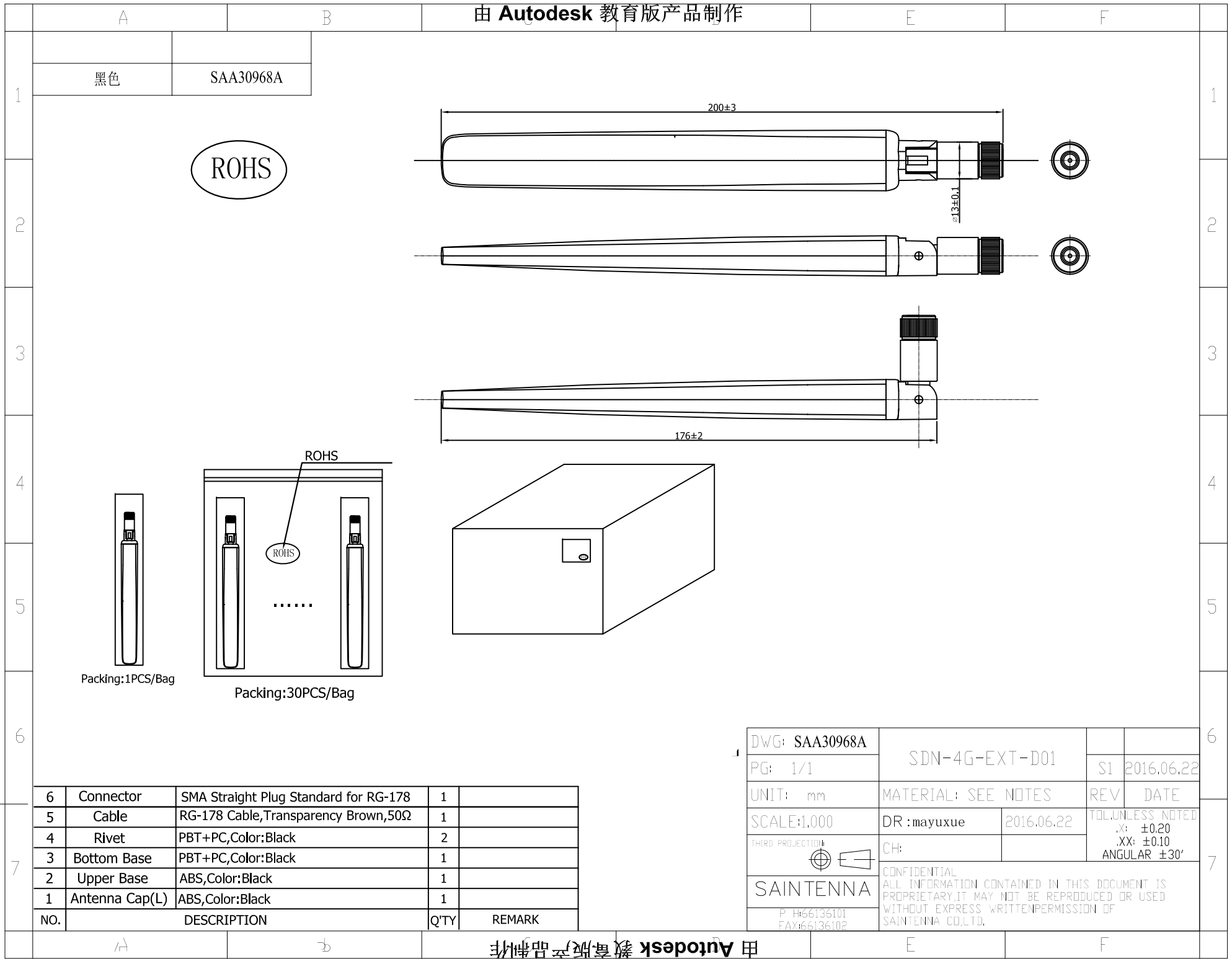
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Catalog

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Standard parameter

一、Specifications

Frequency range	699~960MHz/1710~2700MHz
S. W. R	≤ 3
Gain	4.0dBi
Connector	SMA Plug
Impedance	50 Ohm

二、Reliability test

Project	Test condition	Result
Storage environment	Temperature, humidity, air pressure test are as follows: 1. Temperature: $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$ 2. Humidity: 45%-85% 3. Pressure: 86kpa-106kpa	Normal electrical and mechanical properties
High and low temperature test	The 5 cycle is between 70°C and 40°C . Then check the appearance quality	Meet the mechanical and electrical properties
Resistance to constant damp heat test	Humidity $95 \pm 3\%$, temperature: 40 degrees Celsius. Continuous 2H,	Meet the mechanical and electrical properties
vibration test	Vibration frequency 10-55HZ, displacement: 0.35MM, acceleration: 50.0M/S, Frequency sweep frequency: 30 times	Normal electrical and mechanical properties
Drop test	1m height drop	Normal electrical and mechanical properties
Drawing force test	Push pull tester to test the strength of the instrument: $\geq 10\text{N}$	Normal electrical and mechanical properties
Voltage resistance	1. Insulation spark voltage 1.5KV 2. Sheath spark voltage 1.5KV 3. Insulation resistance to sheath voltage 0.5KV	Normal electrical and mechanical properties



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Company / project	External antenna	Working frequency band	All
Test date	2016/6/22	Test person	Victor Peng
Version number	V1.0	Test sample description	Mould

Free space test data of whole machine passive efficiency:

Freq	Gain	Efficiency
700	1.66	41.00%
710	3.26	49.30%
720	3.95	58.30%
730	3.6	58.10%
740	3.85	55.50%
750	4.04	54.40%
760	3.44	53.30%
770	3.98	57.30%
780	4.45	63.50%
790	3.63	66.00%
800	3.47	67.30%
810	3.19	62.40%
820	2.53	59.20%
830	2.13	57.60%
840	1.89	56.30%
850	2.29	57.10%
860	2.64	60.50%
870	3.01	61.20%
880	2.98	60.60%
890	2.46	57.00%
900	2.38	54.80%
910	2.06	52.30%
920	1.91	51.50%
930	2.06	51.30%
940	2.27	55.40%
950	2.04	54.10%

Freq	Gain	Efficiency
960	1.7	51.90%
970	1.23	47.10%
980	1	44.80%
990	0.82	41.90%
1000	1.17	40.70%
1700	1.67	63.40%
1720	1.94	62.90%
1740	2	64.80%
1760	1.57	60.40%
1780	0.97	56.80%
1800	1.33	55.90%
1820	1.17	56.20%
1840	1.36	55.70%
1860	1.25	51.40%
1880	1.38	49.90%
1900	1.59	51.70%
1920	1.36	52.00%
1940	1.01	49.40%
1960	1.41	51.60%
1980	1.53	53.20%
2000	1.84	52.70%
2020	2.1	50.40%
2040	2.65	54.50%
2060	3.22	56.90%
2080	3.69	56.60%
2100	4.01	59.20%

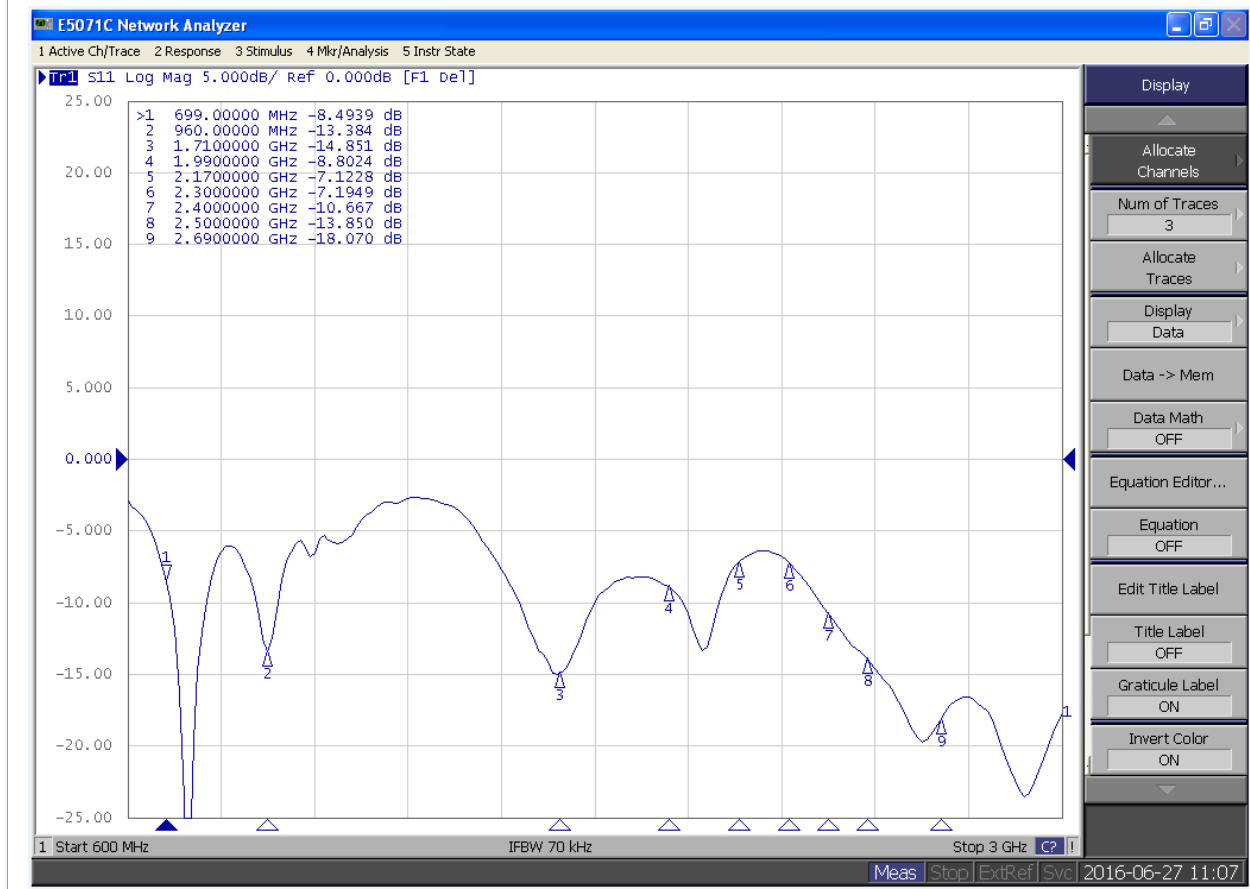
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Freq	Gain	Efficiency
2120	3.69	59.60%
2140	3.22	56.00%
2160	2.46	52.20%
2180	1.45	47.30%
2300	1.25	46.90%
2320	1.49	50.10%
2340	1.49	50.60%
2360	1.49	49.90%
2380	1.57	51.90%
2400	1.88	54.40%
2420	2.15	57.80%
2440	2.85	60.80%
2460	3.35	64.80%
2480	3.6	69.50%

Freq	Gain	Efficiency
2500	3	67.00%
2520	2.68	68.00%
2540	2.44	68.80%
2560	2.3	66.30%
2580	2	59.90%
2600	2.04	60.30%
2620	2.06	61.10%
2640	2	60.70%
2660	1.71	59.90%
2680	1.71	58.60%
2700	1.78	59.00%

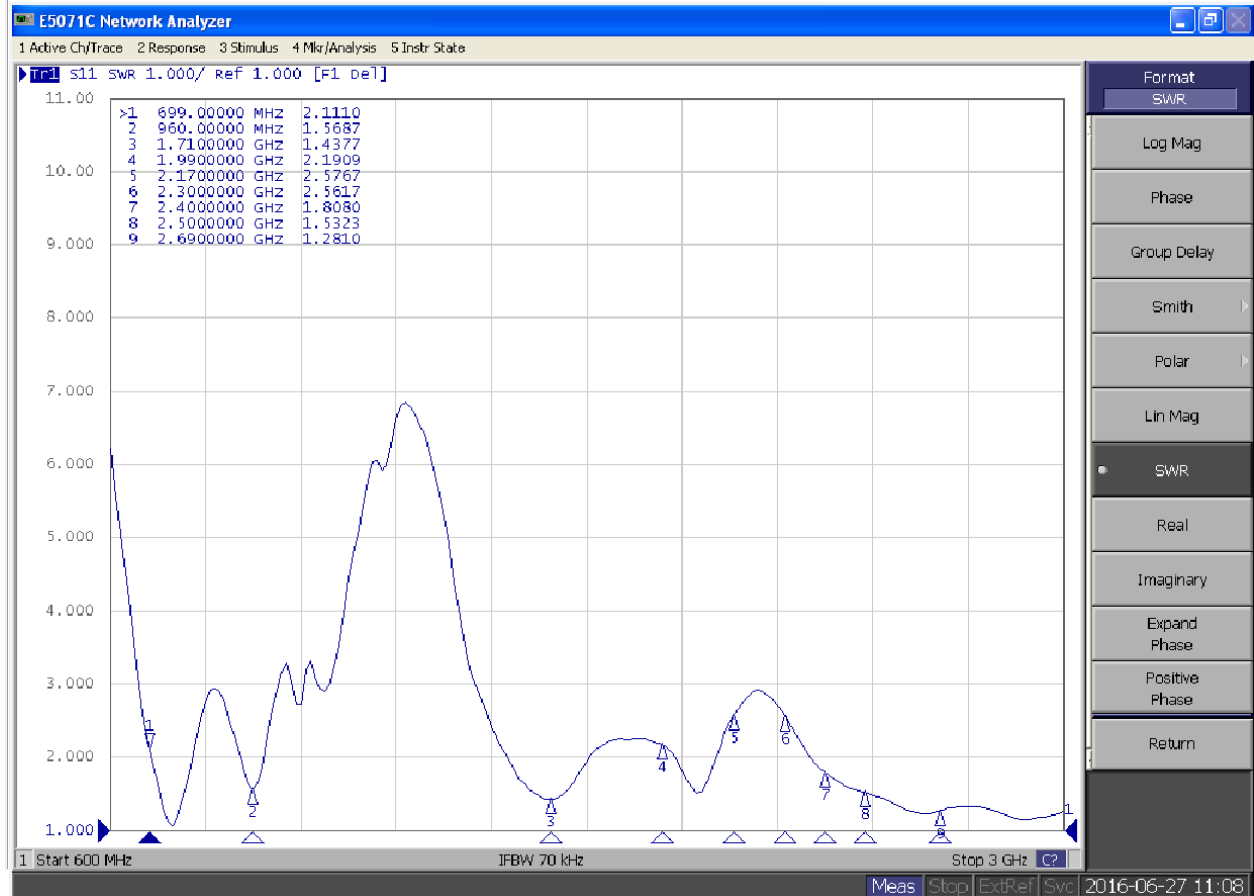
LOG MAG:



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VSWR



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