

Acknowledgment

SPECIFICATION FOR APPROVAL

CUST OMER: EASTSOFT

CUS PART NO: _____

PART NAME: _____

TPT PART NO: DD3001222

EDITION: 1.0

Customer signature: _____ Date: _____

Purchasing Department	engineering department	approval

Toppoint Technology

Date: Nov 19, 2020

engineering department	Sales Department	approval



Please return one specification or one copy of it with your chop and signature of approval and retain the others for your record. In the event of an order being placed for this part number before the chop and signed with specification (or copy) is returned and without special explanation, it will be assumed that full approval have been given.

Product specifications

1、 Finished product drawing



2、 Product test parameters

Name :External suction cup antenna(DD3001222)	Model Type	DDA-U917-222	
ELECTRICAL SPECTIFICATIONS	MECHANICAL SPECTIFICATIONS		
Frenquency Range	915±15 MHz	Height	42±3 mm
Band Width	30 MHz	Connector	RP-SMA
Impedance	50Ω	Chassis material	ABS
VSWR	≤2	Chassis color	black
Gain	1 dBi	Cable Length	/
Polarization	Horizontal/veVertical	Working Temperature	-40°C ~ +85°C
Radiation	omnidirectional	Limit Temperature	-40°C ~ +85°C
Power	50W		

3、Antenna test environment



Test system: sy-16m antenna measurement system / sy-24m antenna measurement system

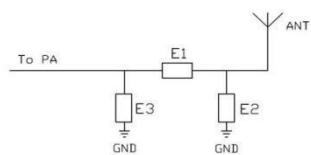
Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test equipment: Agilent 5071c network analyzer, Agilent 8960 comprehensive tester, cmw500 4G comprehensive tester

4、Antenna matching and environment treatment

No environmental treatment

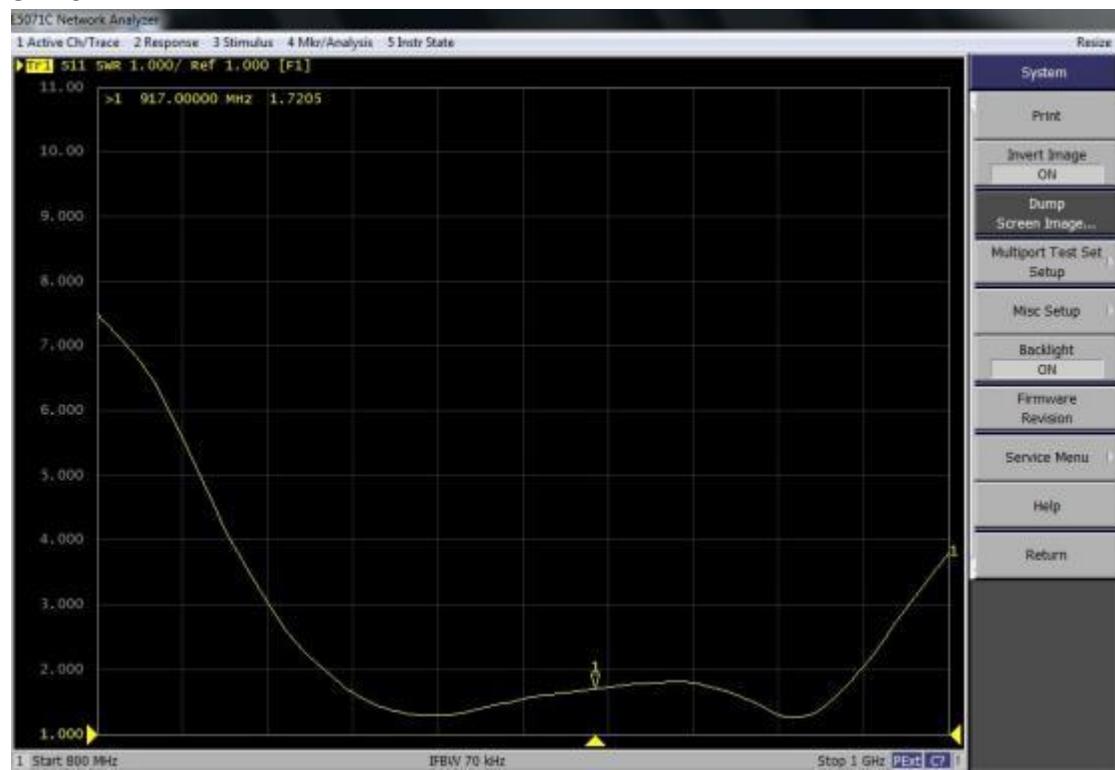
Matching structure



Match description	MINA ANT
E1	0Ω
E2	NA
E3	NA

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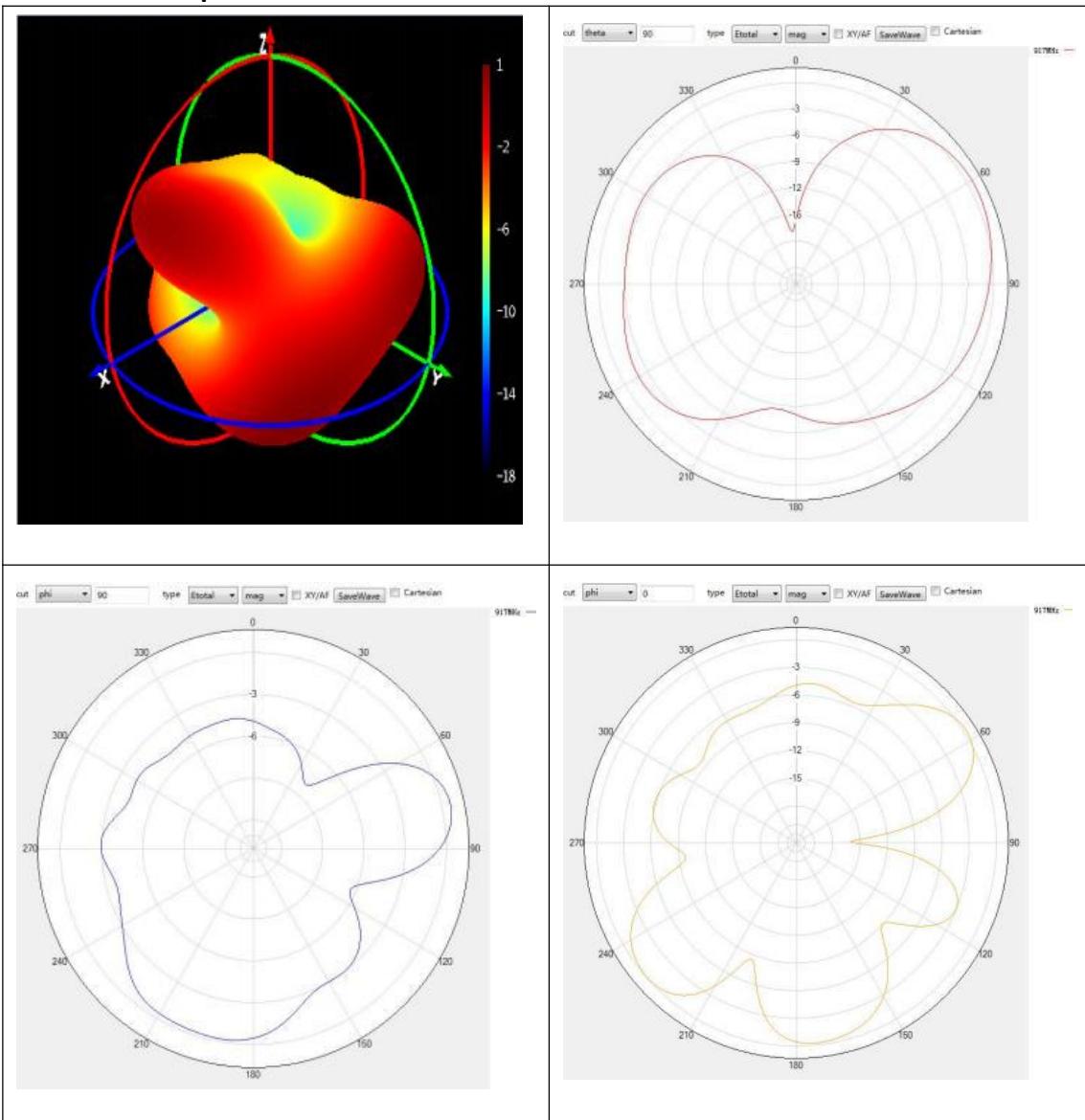
5. VSWR



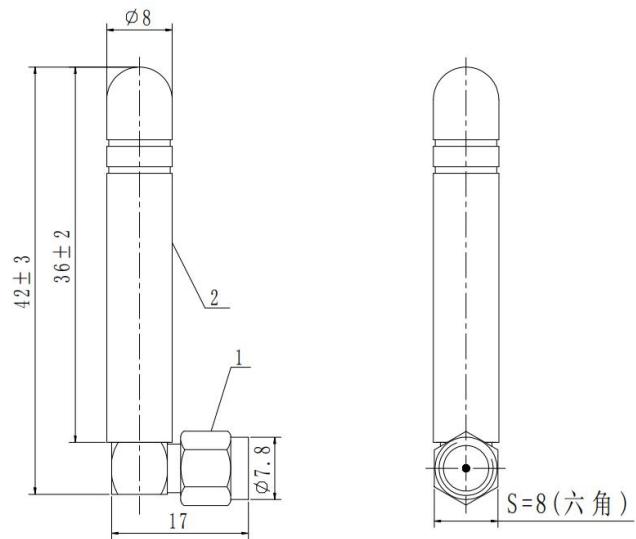
frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率
900	0.79	50.00%
901	0.78	50.38%
902	0.74	50.51%
903	0.72	50.64%
904	0.7	50.91%
905	0.68	50.93%
906	0.66	50.31%
907	0.69	50.43%
908	0.72	50.63%
909	0.77	50.79%
910	0.78	50.46%
911	0.81	50.69%

912	0.82	50.78%
913	0.84	50.81%
914	0.84	50.61%
915	0.89	51.11%
916	0.9	51.26%
917	0.92	51.37%
918	0.92	51.47%
919	0.95	51.91%
920	0.98	52.22%
921	0.94	51.80%
922	0.94	51.85%
923	0.95	52.05%
924	0.96	52.10%
925	0.94	51.82%
926	0.97	51.97%
927	1	52.26%
928	1	52.26%
929	0.97	51.99%
930	1	52.29%

6、Antenna pattern



7、Product structure chart



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8. Environmental reliability test report

High and low temperature humidity test report						
Test project	High temperature, low temperature and constant humidity test					
Test sample Plate name	external suction cup antenna			Date	April 23, 2020	
Experiment / detection equipment	Humidity Chamber network analyzer			Number	5 PCS	
test standard	1. The coating on the metal surface shall be free of defects such as falling off, crack, wrinkling, etc.; the non-metallic part shall be free of defects such as discoloration, cracking, deformation, degumming, etc. 2. The electrical test meets the design requirements; the VSWR Test is qualified.					
test name	Test items	requirem ent	test method	Actual test data	result	
high temperature test	Temperature (°C) Temperature stabilization time of test sample (H) Test duration (H) Recovery time (H)	+85±3 1 2 1	According to Chapter 9 of gb2423.1- 89 Specified method	+83 1.2 2.3 1	1	OK
					2	OK
					3	OK
					4	OK
					5	OK
low temperature test	Temperature (°C) Temperature stabilization time of test sample (H) Test duration (H) Recovery time (H)	-45±3 1 2 1	According to Chapter 8 of gb2423.1- 89 Specified method	-47 1.2 2.4 1.1	1	OK
					2	OK
					3	OK
					4	OK
					5	OK
Constant humidity Thermal test	Temperature (°C) Temperature stabilization time of test sample (H) Test duration (H) Recovery time (H)	+40±2 90-95 21 1	According to the fifth chapter of GB2423.3 -93 Specified method	+42 92 22 1.1	1	OK
					2	OK
					3	OK
					4	OK
					5	OK

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Salt spray test report				
Test items	Salt spray test			
Test sample Plate name	external suction cup antenna		Date	April 23, 2020
Equipment name	Salt spray corrosion test chamber		Number	5 PCS
Test method Concentration of	The test samples were put into the modulated salt solution test chamber and salt spray corrosion chamber for continuous spray test.			
	salt solution	52g/L	PH value of salt solution: 6.5-7.2	Test cycle: 24h
Actual test data	55g/L	PH value of salt solution: 6.8	Test cycle: 26h	
	The test shall be carried out in accordance with GB / t10125 corrosion test in artificial atmosphere and salt spray test;			
Test standard	the results shall be rated in accordance with GB / t6461-2002 corrosion test of metal and other inorganic coatings on metal substrate and the rating of samples and test pieces.			
Test result				
number	Corrosion resistance grade		Actual test data	result
1	Rp/Ra=10/10vsB		Rp/Ra=10/10vsB	OK
2	Rp/Ra=10/10vsB		Rp/Ra=10/10vsB	OK
3	Rp/Ra=10/10vsB		Rp/Ra=10/10vsB	OK
4	Rp/Ra=10/10vsB		Rp/Ra=10/10vsB	OK
5	Rp/Ra=10/10vsB		Rp/Ra=10/10vsB	OK