

Product Number: AN821
Product Name: Disk antenna

Specification For Approval

Date: 2019-04-29

File No.: 190429002

Version: 1.0

Customer : _____

Customer P/N : /

P/N : AN821

Description : Disk antenna SMA公头公针 RG174黑色线L=3000mm

Checked By:

Customer Approved By:

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3. Revision History

Revision	Date	Change Notification	Description
1.0	2019-04-29	初版	

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4. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	824 ~ 960 MHz 1710 ~ 2170 MHz
V.S.W.R.	<= 3.0 @824~ 960 MHz <=3.0 @ 1710~2170 MHz
Peak Gain	- 0.9 dBi @ 824 ~ 960 MHz 2.0 dBi @ 1710 ~ 2170 MHz
Efficiency (%)	40 % @ 824 ~ 960 MHz 50 % @ 1710 ~ 2170 MHz
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	
Material of Plastic	ABS
Cable Type	RG-174
Connecter Type	SMA Male
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

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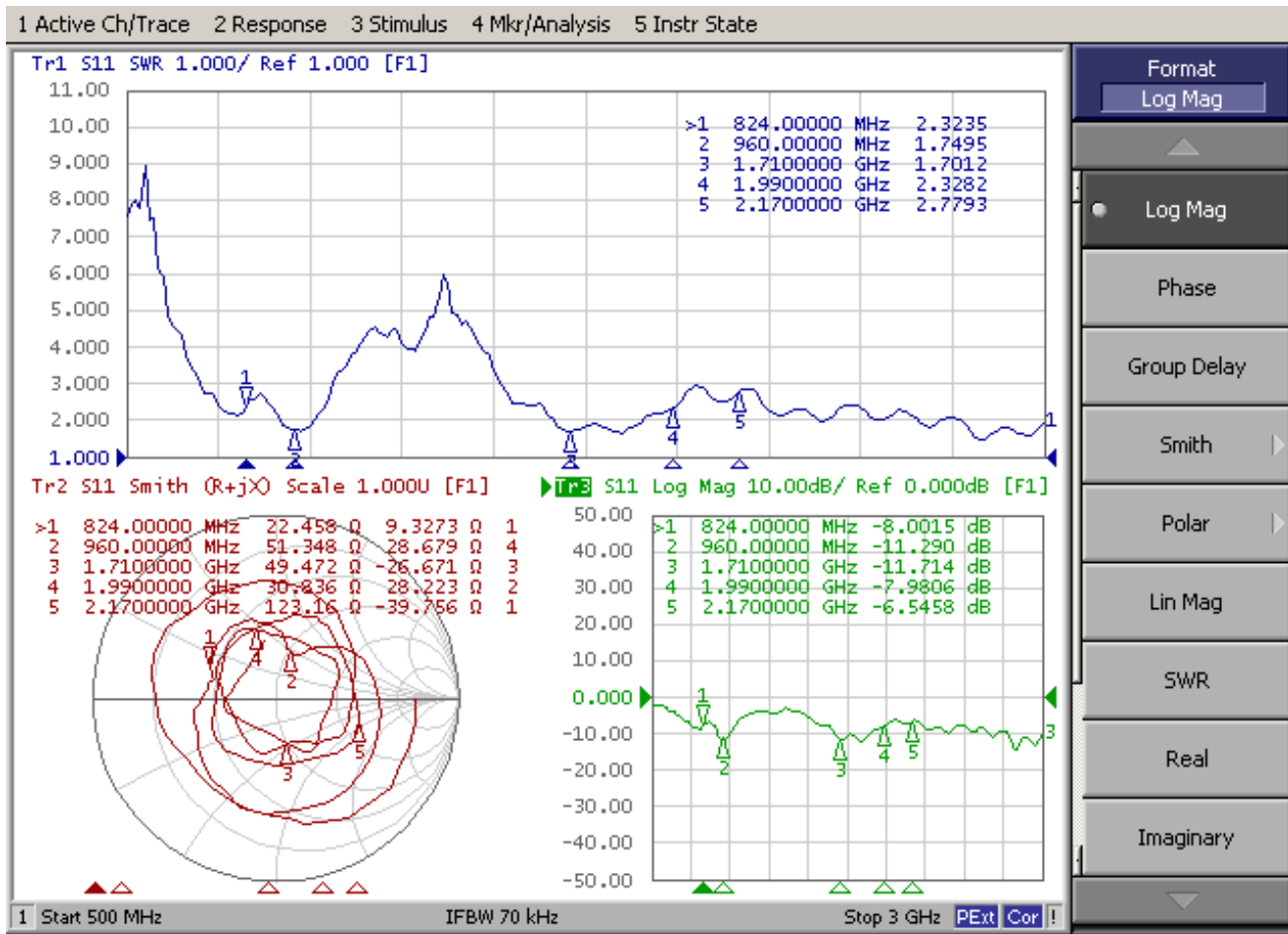
5. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Random Drop	GB / T2423.8-1995 Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	GB 2423 . 28- 82 Solder iron: 260±5°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	GB / T 2423 . 17- 93 Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	GB / T 2423 . 4 - 93 Temp: 80°C / 12 H; -40°C / 12H RH: >= 90%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	GB / T 2423 . 22 - 87 1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life (High Temp.)	GB /T 2423 . 2 - 89 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2011/65/EU
R2	PFOS	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC
R3	PFOA	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC

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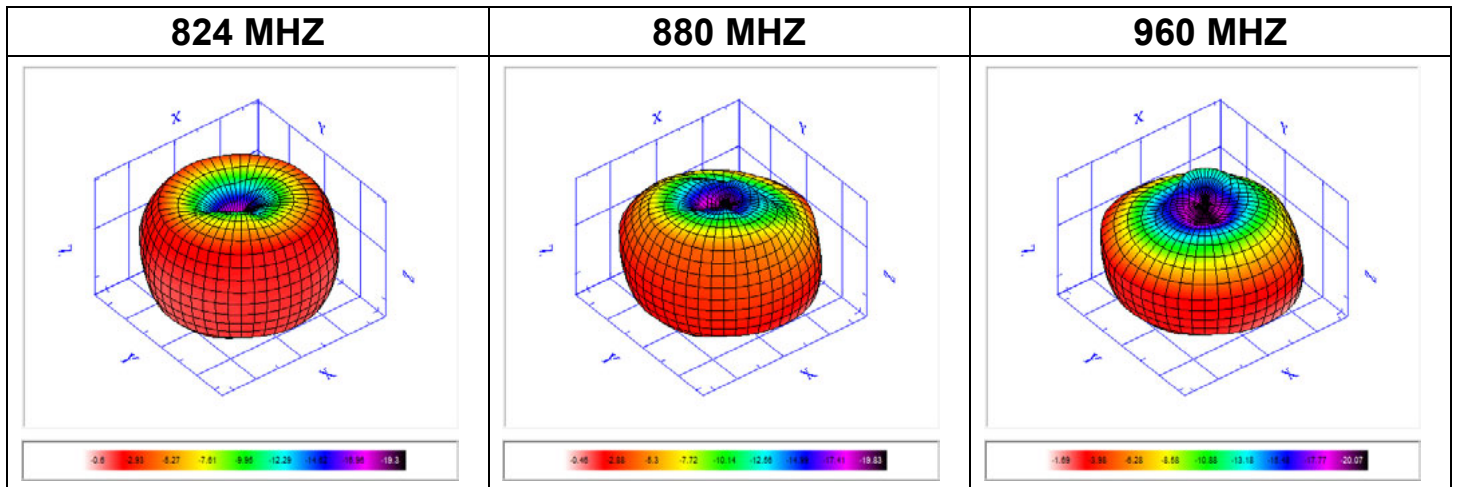
6. Antenna - S Parameter Test Data



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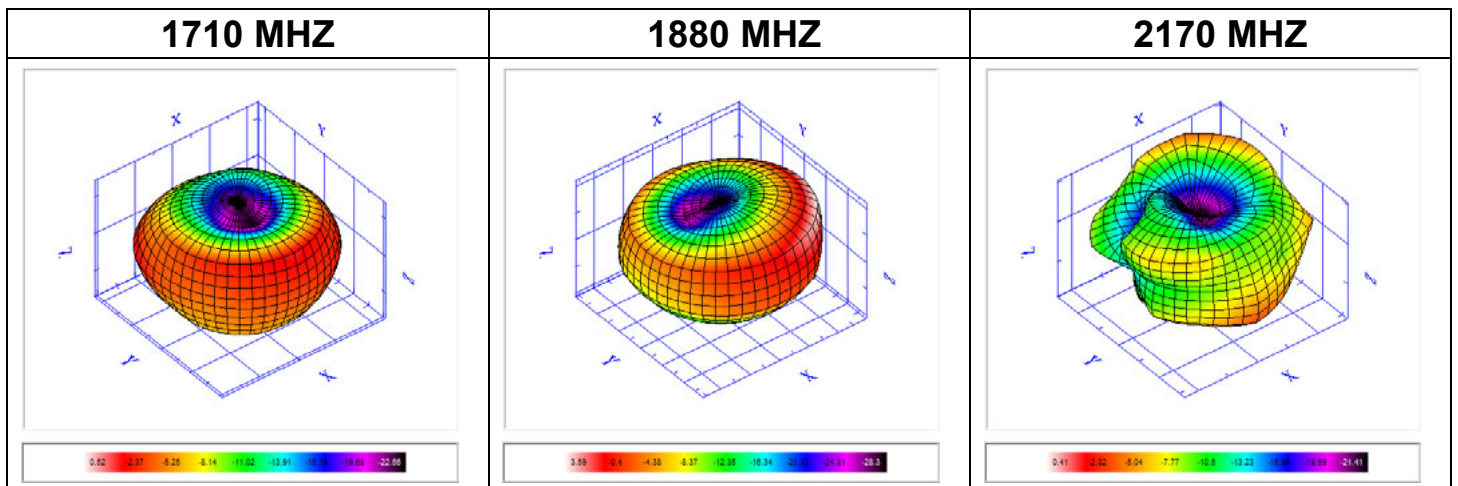
Product Name: Disk antenna

7. Antenna - Radiation Pattern Test Data



Frequency	704	824	880	960
TRP (dBm)	-3	-3.68	-4.28	-5.23
Peak EIRP (dBm)	-0.6	-0.46	-1.12	-1.69
NHPRP +/- 45 (degree)	-3.06	-3.61	-4.21	-5.09
NHPRP +/- 30 (degree)	-3.41	-4.19	-4.8	-5.8
E-Theta Peak Gain (dBi)	-17.2	-12.77	-13.47	-13.15
E-Phi Peak Gain (dBi)	-0.6	-0.54	-1.14	-1.7
E-Total Peak Gain (dBi)	-0.6	-0.46	-1.12	-1.69
Directivity (dBi)	2.4	3.23	3.16	3.54
Efficiency (%)	50.15	42.81	37.31	30.02

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Frequency	1710	1880	1990	2000	2100	2200	2300	2400	2500	2600	2700
TRP (dBm)	-2.79	-4.67	-2.59	-2.27	-2.22	-1.54	-2.08	-2.13	-2.75	-4.61	-6.96
Peak EIRP (dBm)	0.52	1.25	3.17	3.3	2.62	3.59	2.7	2.5	2.79	0.86	0.41
NHPRP +/- 45 (degree)	-2.94	-5.42	-3.18	-2.82	-2.7	-2.14	-2.69	-2.33	-2.78	-4.59	-6.73
NHPRP +/- 30 (degree)	-3.34	-5.49	-3.54	-3.21	-2.75	-1.99	-2.73	-2.71	-3.29	-5.96	-8.68
E-Theta Peak Gain (dBi)	-15.05	-13.61	-9.69	-9.56	-12.75	-12.82	-12.03	-12.02	-9.79	-6.75	-7.68
E-Phi Peak Gain (dBi)	0.46	1.21	3.13	3.26	2.57	3.55	2.66	2.47	2.7	0.65	0.17
E-Total Peak Gain (dBi)	0.52	1.25	3.17	3.3	2.62	3.59	2.7	2.5	2.79	0.86	0.41
Directivity (dBi)	3.31	5.92	5.76	5.57	4.84	5.13	4.78	4.64	5.54	5.47	7.37
Efficiency (%)	52.62	34.12	55.12	59.3	60.01	70.19	61.88	61.17	53.06	34.56	20.14

8. Mechanical Drawing

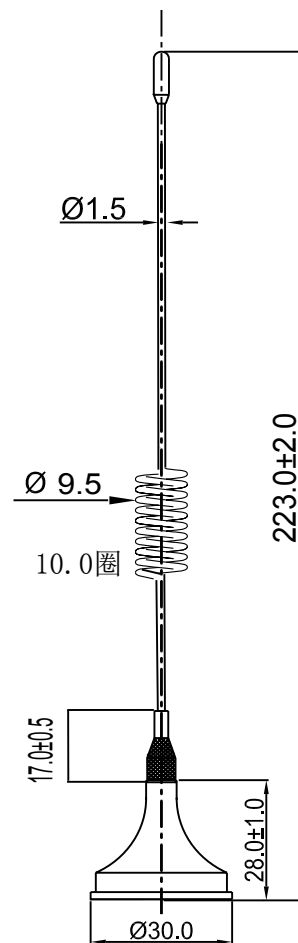
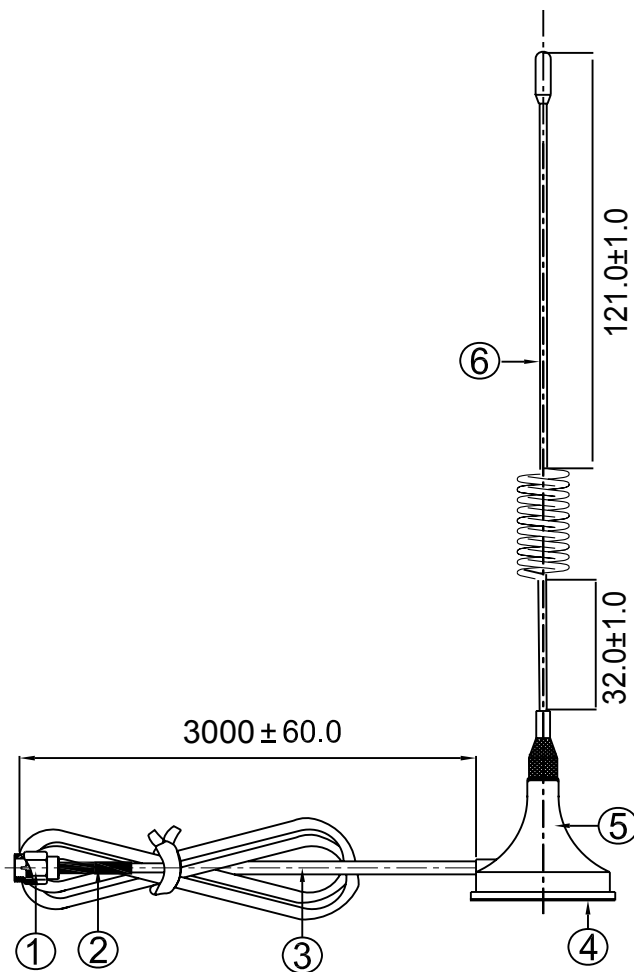
See attached files

9. Material Description and RoHS Test Report

See attached files

RoHS
Compatible

REV.	DESCRIPTION	DATE
△	首次发行	2019.04.29



6	R-AB01-06-G		Black	1	
5	BASE-AB01-01B		Black	1	
4	GS-AB01-01A		Black	1	
3	RG-174-64	Cable	Black	1	
2	R-HSTUBE-0035N	TUBE	Black	1	
1	A024-SMA-C-004	SMA Male		1	
No.	Part Number	Name	Material	Finish	Q'ty

PART NAME: GSM Disk Antenna				
PART NO.: AN821			DATE:	
APPROVED BY	CHECKED BY	DESIGNED BY	 UNITS: mm SCALE: 1/1 REVISION: A	Tolerance X.X ±0.50 X.XX ±0.15 X° ±3°
LQ		DJC		
2019.04.29		2019.04.29		

產品包裝規範

PACKING CRITERION

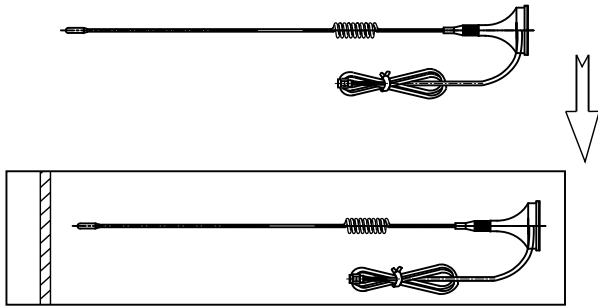


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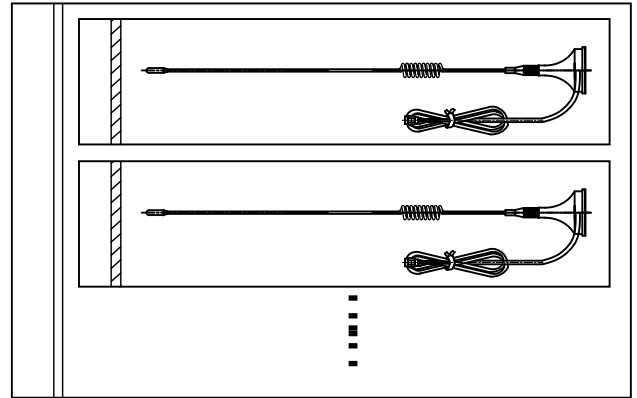
Part Number : AN821	Revision : A
Name: GSM 磁盤天线	Customer : ALL

一. 装小PE袋



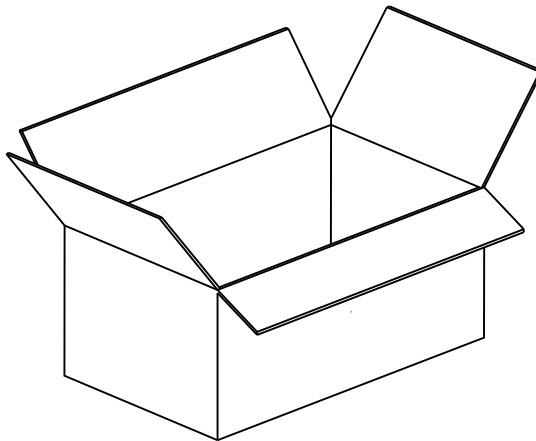
R-PE-BAG-25080006 1pcs/袋

二. 装大PE袋



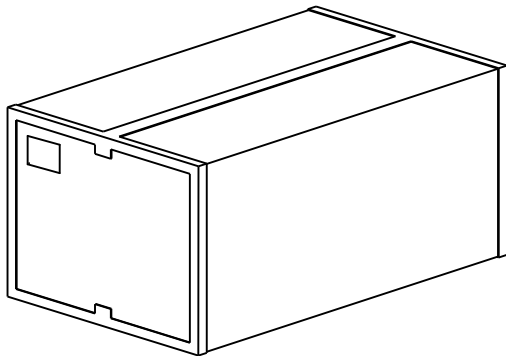
R-PE-BAG-360290006 20PCS/住

三. 装箱



规格: 44*30*28CM 300PCS/箱

四. 封箱



側麥

正麥

堯叨弄囉 V 姪匪噶字侷僕卦VI

APPROVED BY : LQ

CHECKED BY : DJC

DESIGNED BY : DJC