

TP-LINK®

Antenna Specification



Product Number: 3101505120

Product Name: Antenna

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<http://www.tp-link.com>

Product Number: 3101505120

Product Name: Antenna

TP-LINK®

Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: _____ / _____

Customer P/N : _____ / _____

TP-LINK P/N: 3101505120

Description: Antenna|2.4-2.5GHz|1.97dBi|LP|Omni|2W|I-PEX|160mm|D1.37mm|无|无
[X1031-WI160Rev1.0|绿色|否|[自制件/X50-PoE/2G 天线 1]

TP-LINK Checked By:

Customer Approved By:

TP-LINK®

TP-LINK TECHNOLOGIES CO., LTD.

South Buiding, No.5 Keyuan Road,
Central Zone, Science&Technology Park,
Nanshan, Shenzhen, P.R.China

TEL: + 86 755 26612350

+ 86 755 26504400

[http:// www.tp-link.com](http://www.tp-link.com)

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I. Specification

Sample Photo



A. Electrical Characteristics

Frequency	2400~2500MHz
Impedance	50 Ohm
S.W.R.	≤ 2.0
Antenna Type	Dipole
Antenna Gain	1.98dBi
Max Input Power	2 W
Polarization	Linear
Radiation pattern	Omni-Directional

B. Material & Mechanical Characteristics

Material of Radiator	Cu
Cable Type	O.D. 1.37mm (Gray)
Connector Type	I-PEX
Connector Pull Test	3Kg

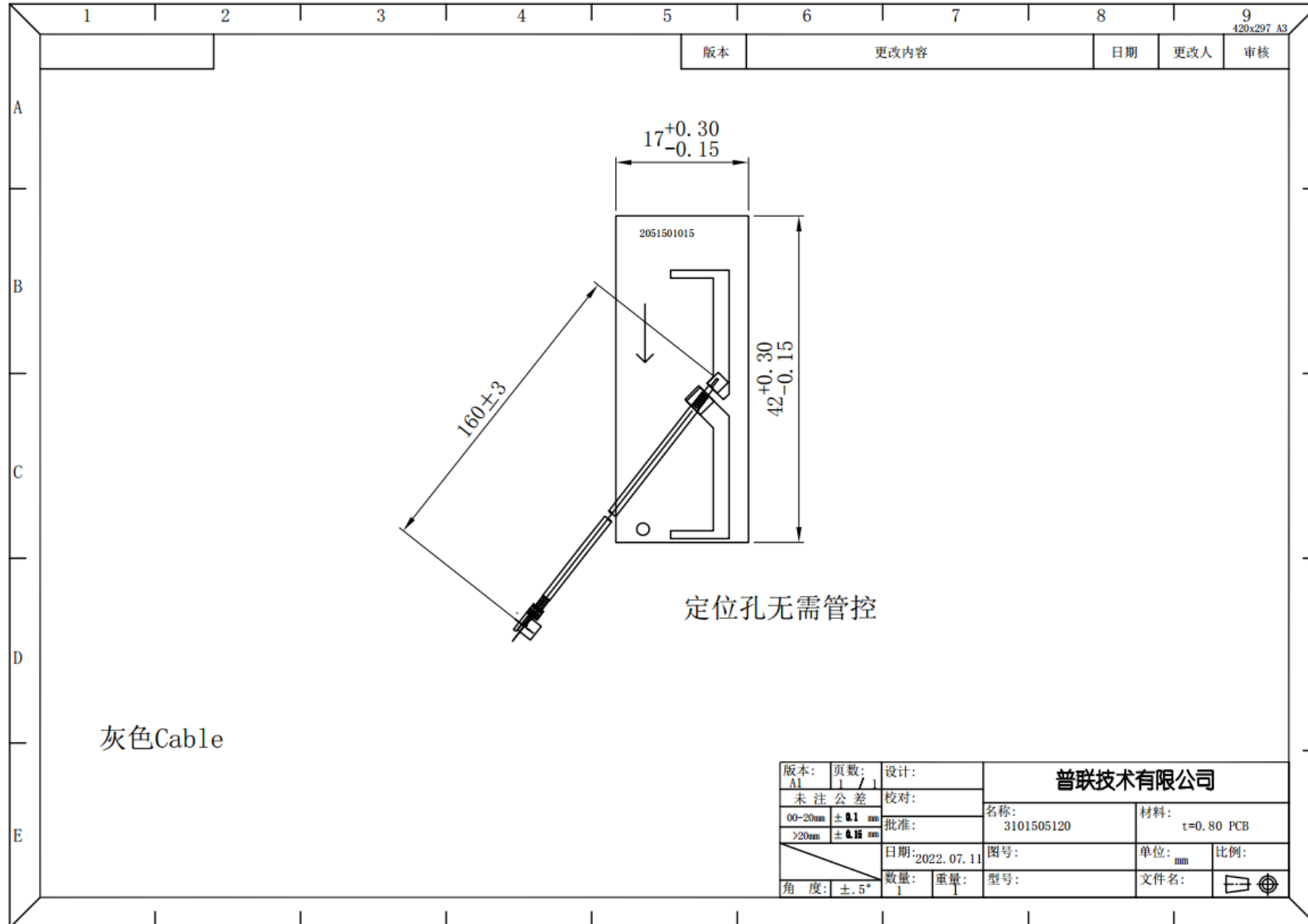
C. Environmental

Operation Temperature	- 40°C ~ + 65°C
Storage Temperature	- 40°C ~ + 70°C

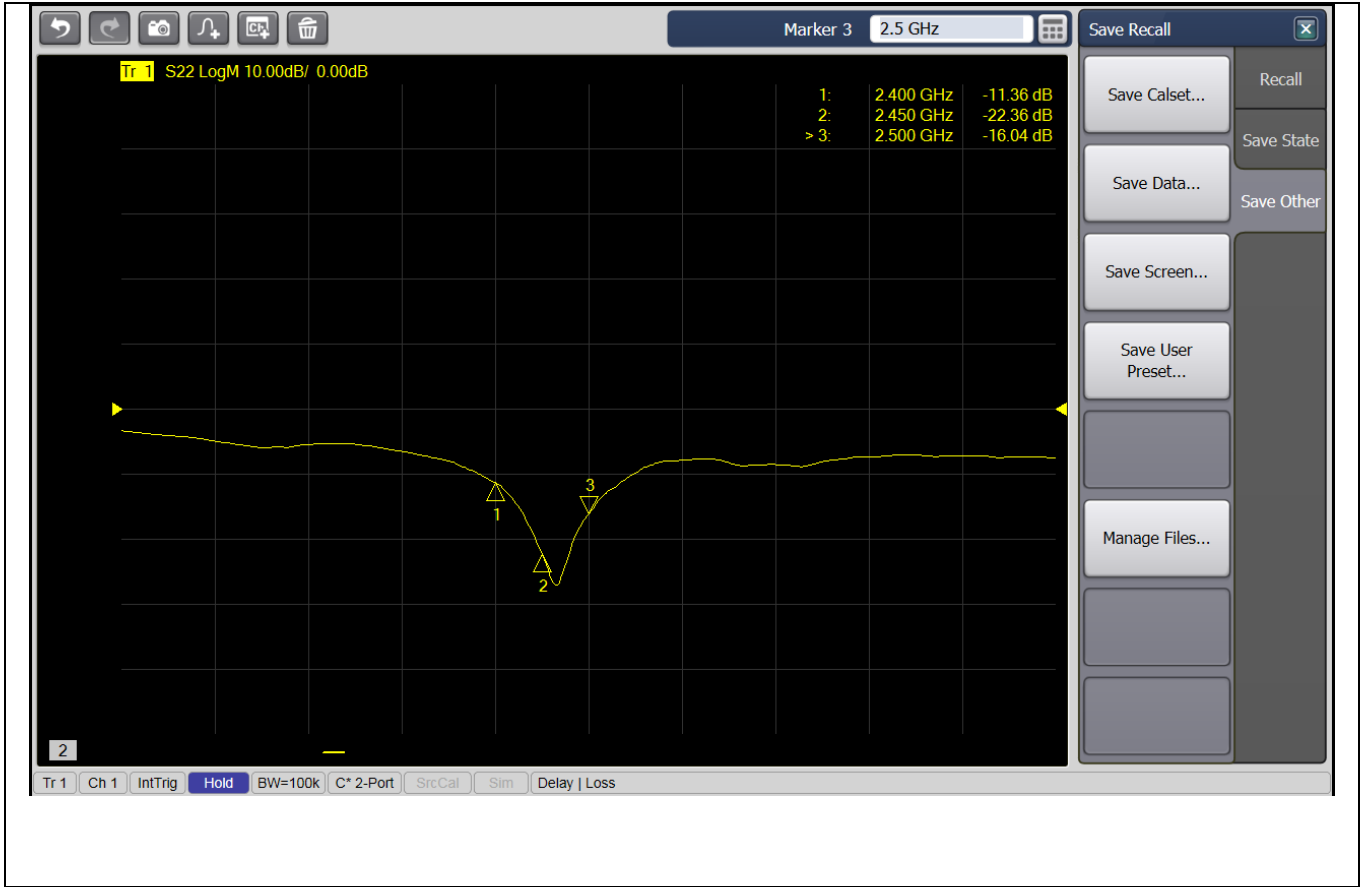
II. Characteristics and Reliability Test

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	MIL-STD-202G, 201 A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. <=5%
M2	Random Drop	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol. <=5%
M3	Drop Test	Combine DUT with router; Height: 0.6 Meter; 1 direction; 3 times for the direction	1. No parts separated 2. Frequency Tol. <=5%
M4	Solderability	MIL-STD-202G, 210F, cond. A Solder iron: 350+- 10°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M5	Terminal- Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol. <=5%
M6	Bend Test	3 angles: 0° ,45° ,90° .100 times for each angle	1. No Visual Damage 2. No Obvious shake
M7	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	SE-GS-90T Temp: 35°C; RH: 93%±3%; NaCl solution proportion: 1.026 ~ 1.041; Time:12 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. <=5%
E2	Thermal Shock	1Cycle: -40°C (30 minutes) to +70°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. <=5%
E3	Life (HighTemp.)	MIL-STD-202G,108A, cond. A Temp: 70°C; Time: 8 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. <=5%

III. Mechanical Drawing and Material Description



IV. Antenna – S Parameter Test Data

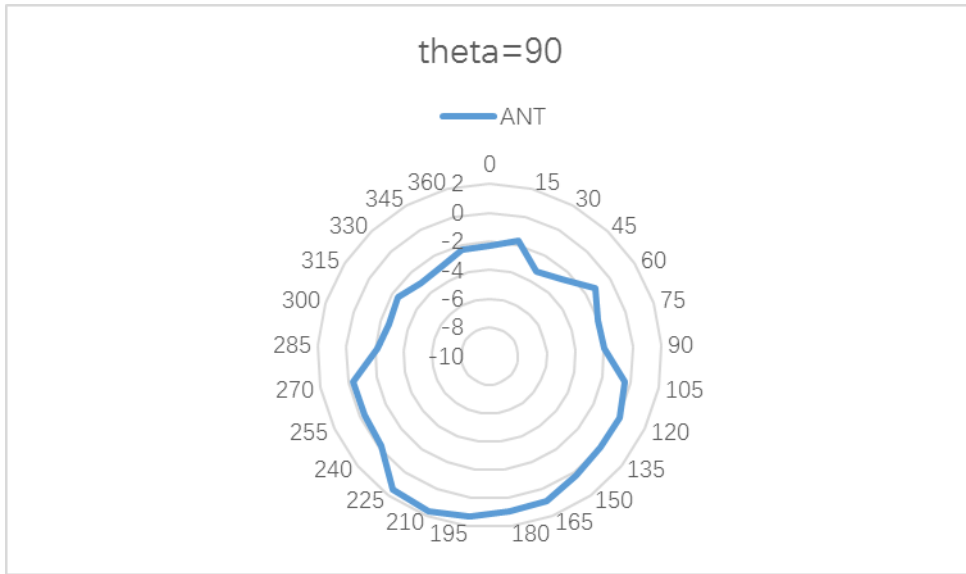


V. Antenna – Radiation Pattern Test Data

Testing Equipment Specification	
Microwave Chamber	Satimo SG24-S
Testing Equipment	Agilent 5071B

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.83	1.86	1.82	1.84	1.85	1.80	1.79	1.91	1.89	1.83	1.97

2440MHz



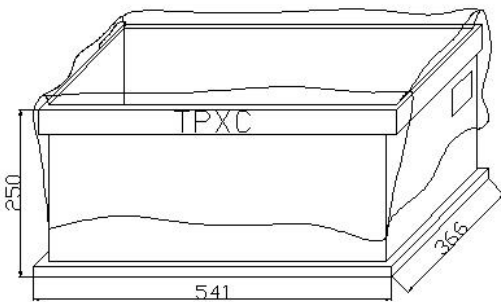
VI. Packing Drawing

i . Put ANT into Plastic Tray (仅作装箱说明)




200PCS/bag

ii. Packing

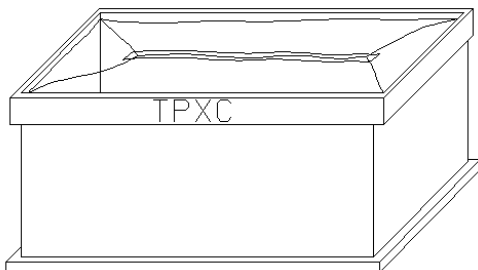


2000PCS/Box

Label

MO:		P/N:		
Specification:				
Quantity:	(PCS)	G.W:	(Kg)	
Date:				
Manufacturer:	Cable manufacturing department			

iii. Sealing



TP-LINK®

Antenna Specification



Product Number: 3101505121

Product Name: Antenna

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Product Number: 3101505121

Product Name: Antenna

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Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: _____ / _____

Customer P/N : _____ / _____

TP-LINK P/N: 3101505121

Description: Antenna|2.4-2.5GHz|1.97dBi|LP|Omni|2W|I-PEX|78mm|D1.13mm|无|无
[X1032-WI078Rev1.0|绿色|否|[自制件/X50-PoE/2G 天线 2]

TP-LINK Checked By:
Customer Approved By:

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South Buiding, No.5 Keyuan Road,
Central Zone, Science&Technology Park,
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TEL: + 86 755 26612350

+ 86 755 26504400

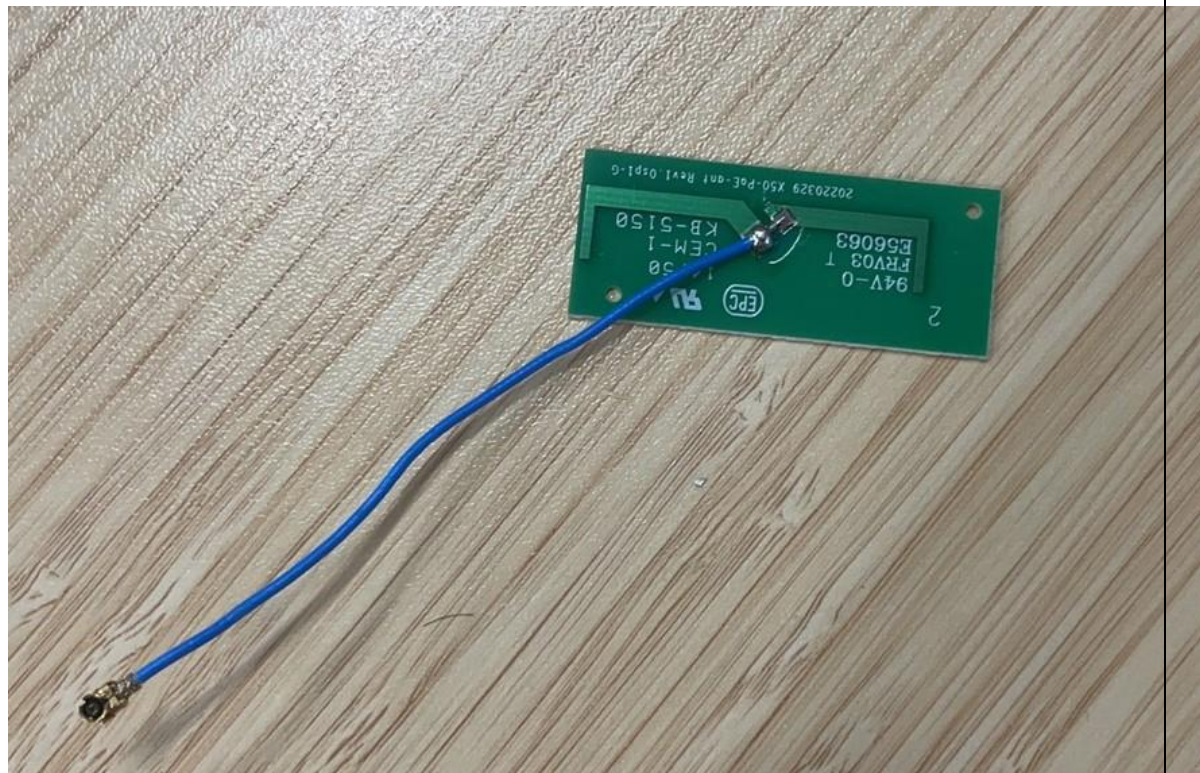
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I. Specification

Sample Photo



A. Electrical Characteristics

Frequency	2400~2500MHz
Impedance	50 Ohm
S.W.R.	<= 2.0
Antenna Type	Dipole
Antenna Gain	1.97dBi
Max Input Power	2 W
Polarization	Linear
Radiation pattern	Omni-Directional

B. Material & Mechanical Characteristics

Material of Radiator	Cu
Cable Type	O.D. 1.13mm (Blue)
Connector Type	I-PEX
Connector Pull Test	3Kg

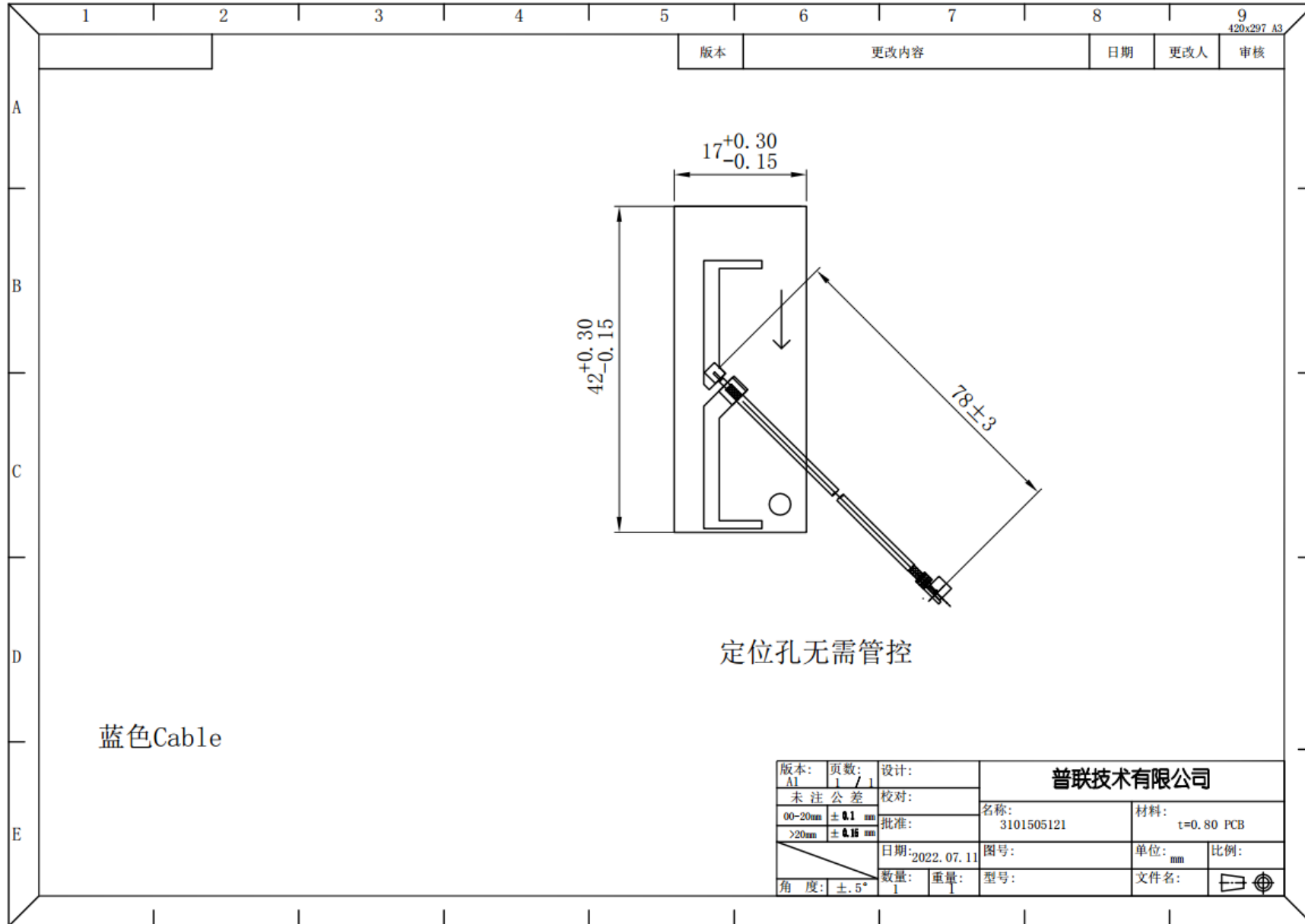
C. Environmental

Operation Temperature	- 40°C ~ + 65°C
Storage Temperature	- 40°C ~ + 70°C

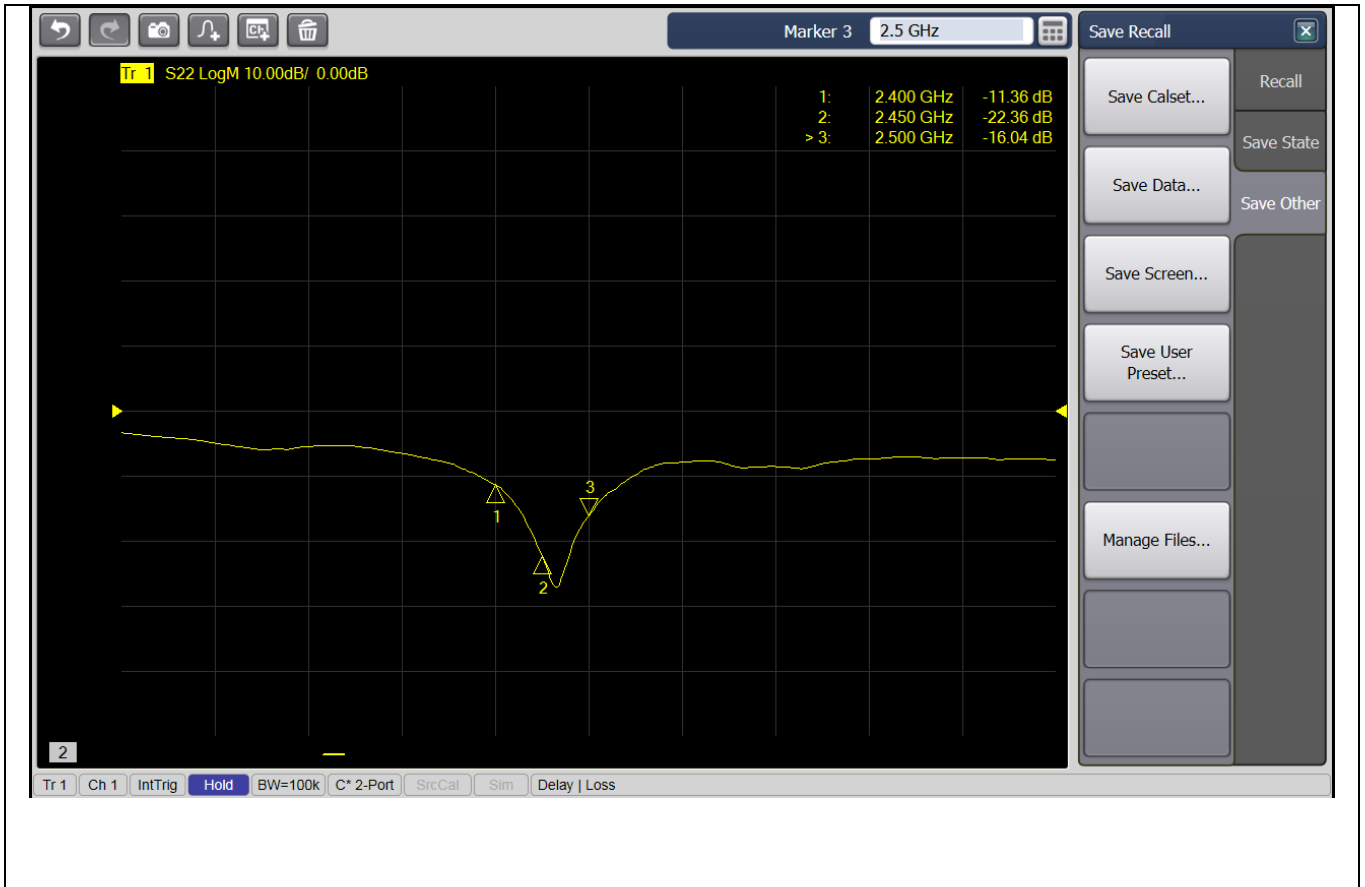
II. Characteristics and Reliability Test

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	MIL-STD-202G, 201 A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. <=5%
M2	Random Drop	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol. <=5%
M3	Drop Test	Combine DUT with router; Height: 0.6 Meter; 1 direction; 3 times for the direction	1. No parts separated 2. Frequency Tol. <=5%
M4	Solderability	MIL-STD-202G, 210F, cond. A Solder iron: 350+- 10°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M5	Terminal- Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol. <=5%
M6	Bend Test	3 angles: 0° ,45° ,90° .100 times for each angle	1. No Visual Damage 2. No Obvious shake
M7	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	SE-GS-90T Temp: 35°C; RH: 93%±3%; NaCl solution proportion: 1.026 ~ 1.041; Time:12 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. <=5%
E2	Thermal Shock	1Cycle: -40°C (30 minutes) to +70°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. <=5%
E3	Life (HighTemp.)	MIL-STD-202G,108A, cond. A Temp: 70°C; Time: 8 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. <=5%

III. Mechanical Drawing and Material Description



IV. Antenna – S Parameter Test Data

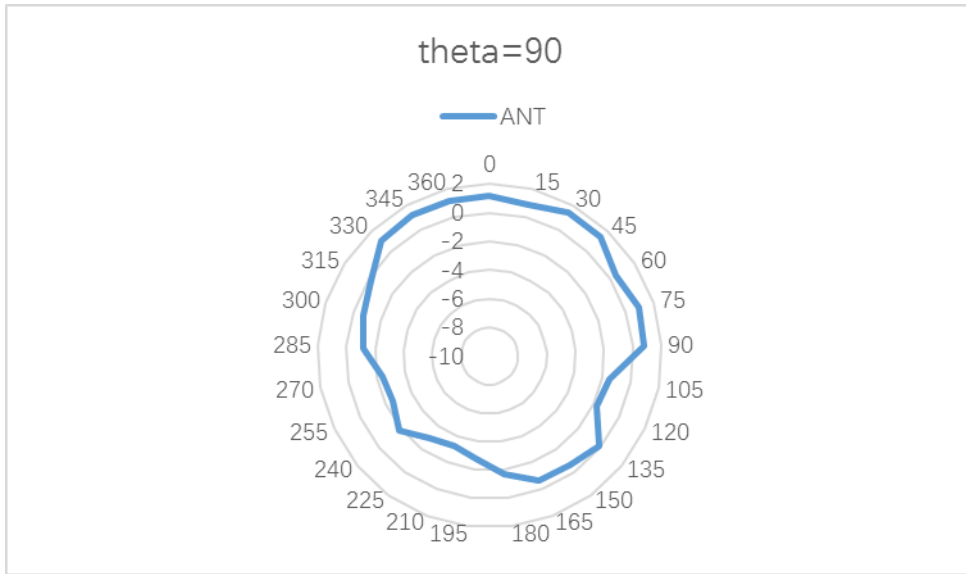


V. Antenna – Radiation Pattern Test Data

Testing Equipment Specification	
Microwave Chamber	Satimo SG24-S
Testing Equipment	Agilent 5071B

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.90	1.93	1.91	1.88	1.84	1.91	1.95	1.97	1.90	1.87	1.89

2450MHz



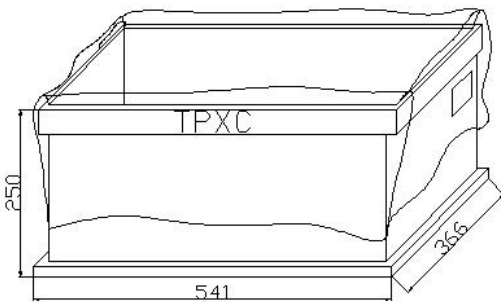
VI. Packing Drawing

i . Put ANT into Plastic Tray (仅作装箱说明)




200PCS/bag

ii. Packing



2000PCS/Box

Label

MO:		P/N:		
Specification:				
Quantity:	(PCS)	G.W:	(Kg)	
Date:				
Manufacturer:	Cable manufacturing department			

iii. Sealing

