

TP-LINK®

Antenna Specification



Product Number: 3101503989

Product Name: Antenna

TP-LINK®

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Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: _____ / _____

Customer P/N : _____ / _____

TP-LINK P/N: 3101503989

Description: Antenna|2.4-2.5GHz|2.0dBi|LP|Omni|2W|Weld|100mm|D1.13mm|蓝
鲸-70|无|X1020-HW100REV7.2|TP 白/PC/蚀纹|防水/IP66|[自制件/白
色 PE 外被同轴线/硅胶圈线径 1.25mm/气密全检]

TP-LINK Checked By:

Customer Approved By:

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I. Specification

Sample Photo	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
Impedance	50 Ohm
S.W.R.	<= 2.0
Antenna Type	Dipole
Antenna Gain	2.0dBi
Max Input Power	<= 2 W
Polarization	Linear
Radiation pattern	Omni-Directional
B. Material & Mechanical Characteristics	
Material of Radiator	PCB(CEM-1+Cu)
Material of Plastic	Body: PC Holder: PC
Cable Type	PE. 1.13mm (White)
Connector Type	Weld
Connector Pull Test	3.0Kg
C. Environmental	
Operation Temperature	- 10°C ~ + 60°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;	Directive DUT specification

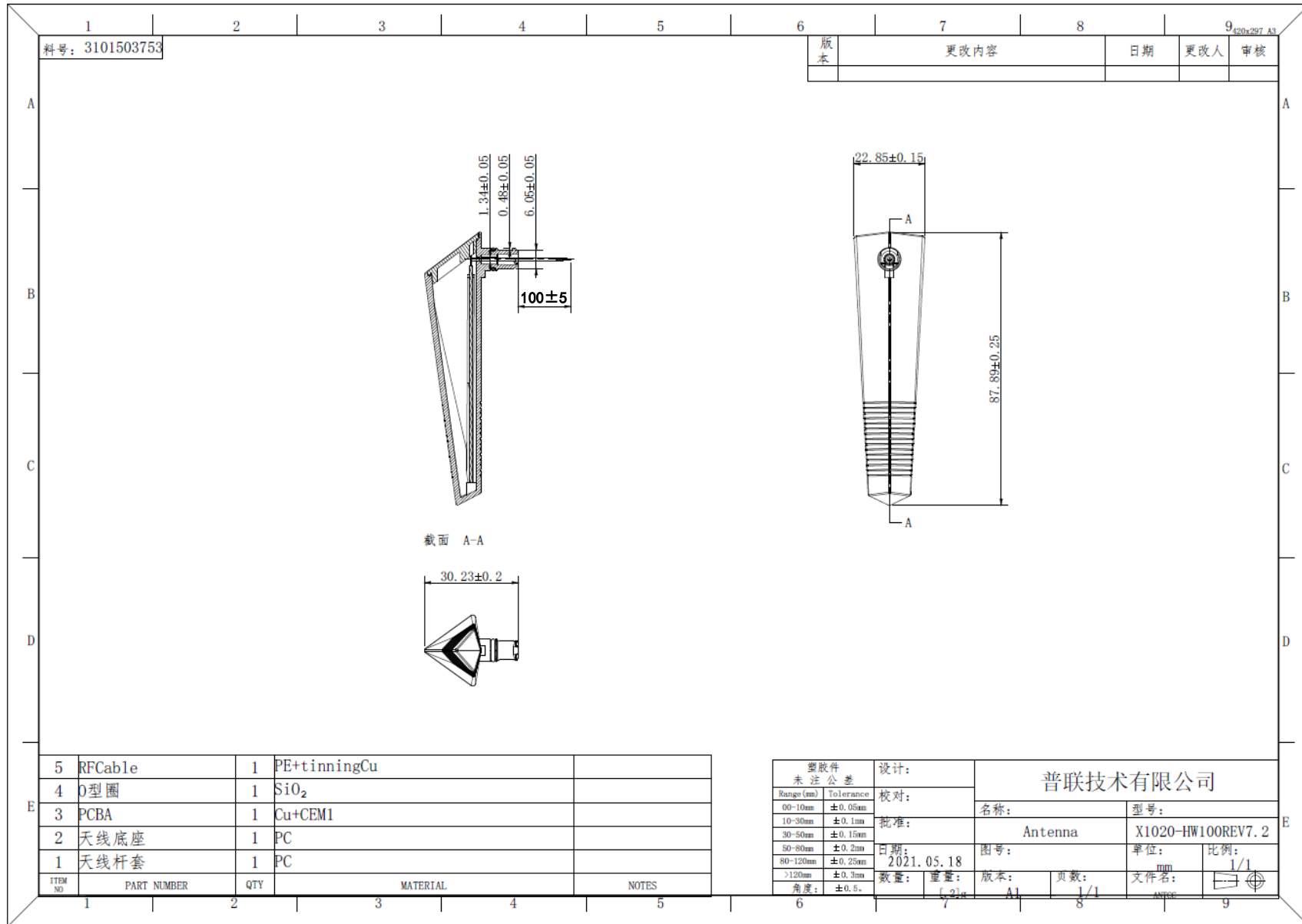
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		make individual calibration to test	
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	MIL-STD-202G, 201 A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours 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	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%
M5	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: -20°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



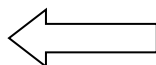
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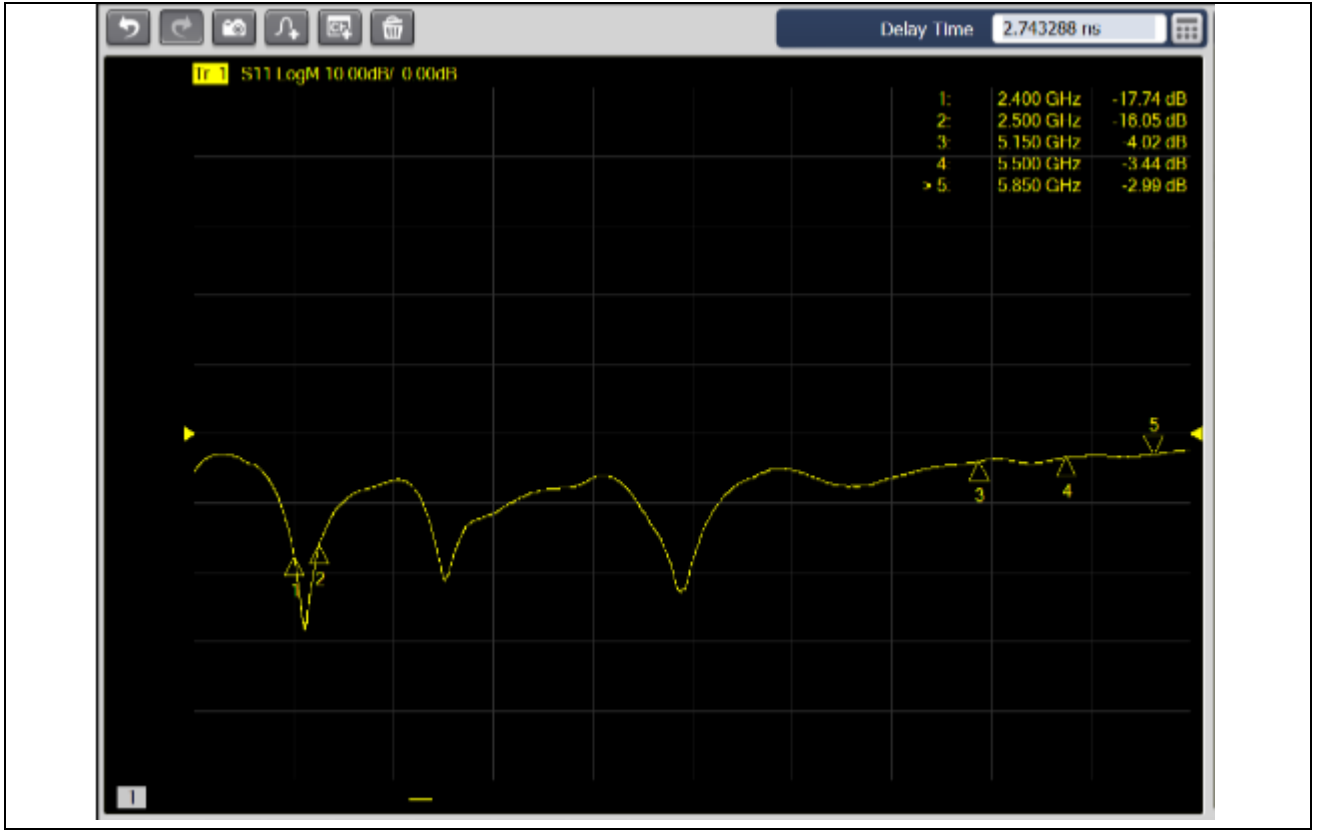


RoHS Test Report

NO.	Product Model	Constituents	Material	Test Result for RoHS-corresponding Substance						PFOS	Halogen				Series No.	Date	Title	Test Agent	
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs		PFOS	F	Cl	Br					I
1	2051500200	PCB	CEM-1	2	2	2	2				50mg/kg	50mg/kg	50mg/kg	50mg/kg	NO.CANEC1601019327	2016/02/01	Sub	广州 SGS	
2	6142501780	Body 1	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.			N.D.	N.D.		SCL01G055729002	2014/11/26	GP-1006FMR	上海 SGS	
			PC		N.D.		N.D.											广州 SGS	
3	6142501780	Body 2	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.			N.D.	N.D.		SCL01G055729002	2014/11/26	GP-1006FMR	上海 SGS	
			PC		N.D.		N.D.											广州 SGS	
4	3110500018	Connector	PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.						CE/2012/13508	2012.01.18	-	台湾 SGS	
			Copper	N.D.	17	N.D.	Negative									CE/2012/23265	2012.02.21	-	台湾 SGS
			Copper	N.D.	19	N.D.	Negative									CE/2012/25023	2012.03.02	-	台湾 SGS
5	3120500035	Cable	Cu+Sn	7	N.D.	N.D.	Negative	N.D.	N.D.			N.D.	N.D.	N.D.	ECL03G00367502E	2014/12/08	Cable	CTI	
			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.			>100000	N.D.	N.D.	N.D.	SHAEC1500664109	2015/01/13	Cable	SGS
			PET4CU8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.			N.D.	N.D.	N.D.	N.D.	CANEC1420243205	2014/12/11	Cable	SGS
			Cu+Ag.	N.D.	N.D.	N.D.	Negative	N.D.	N.D.							SHAEC1507036516	2015/04/28	Cable	CTI



IV. Antenna – S Parameter Test Data

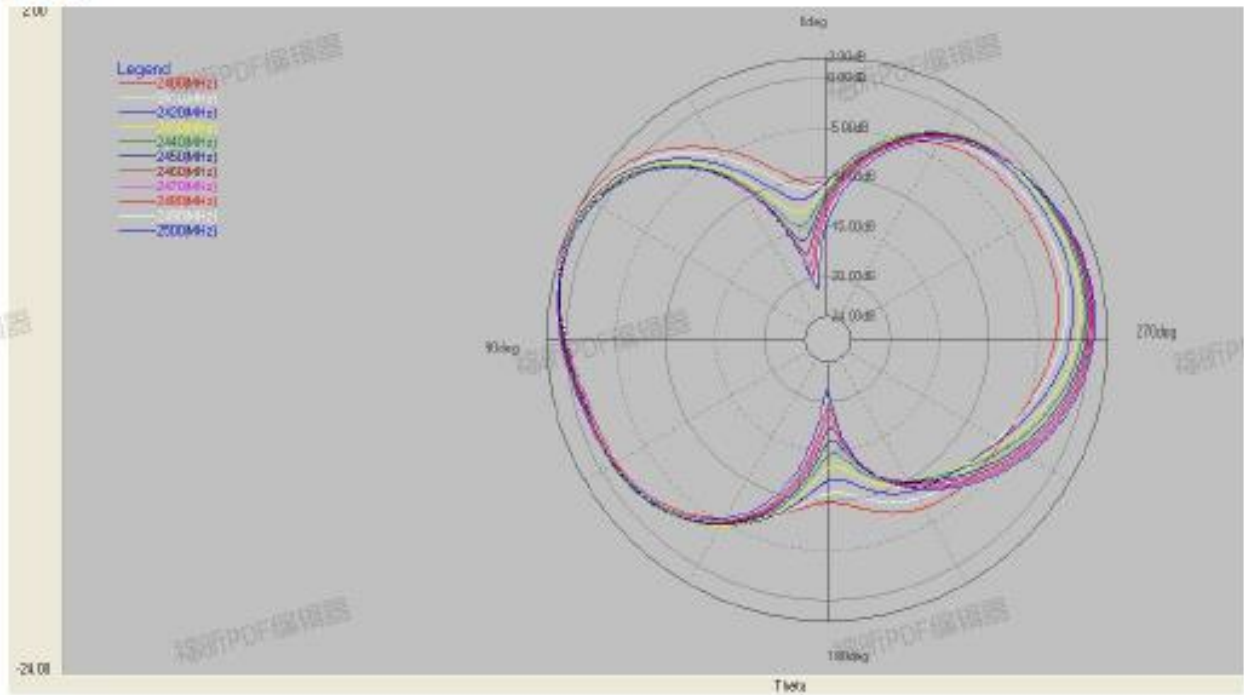


V. Antenna – Radiation Pattern Test Data

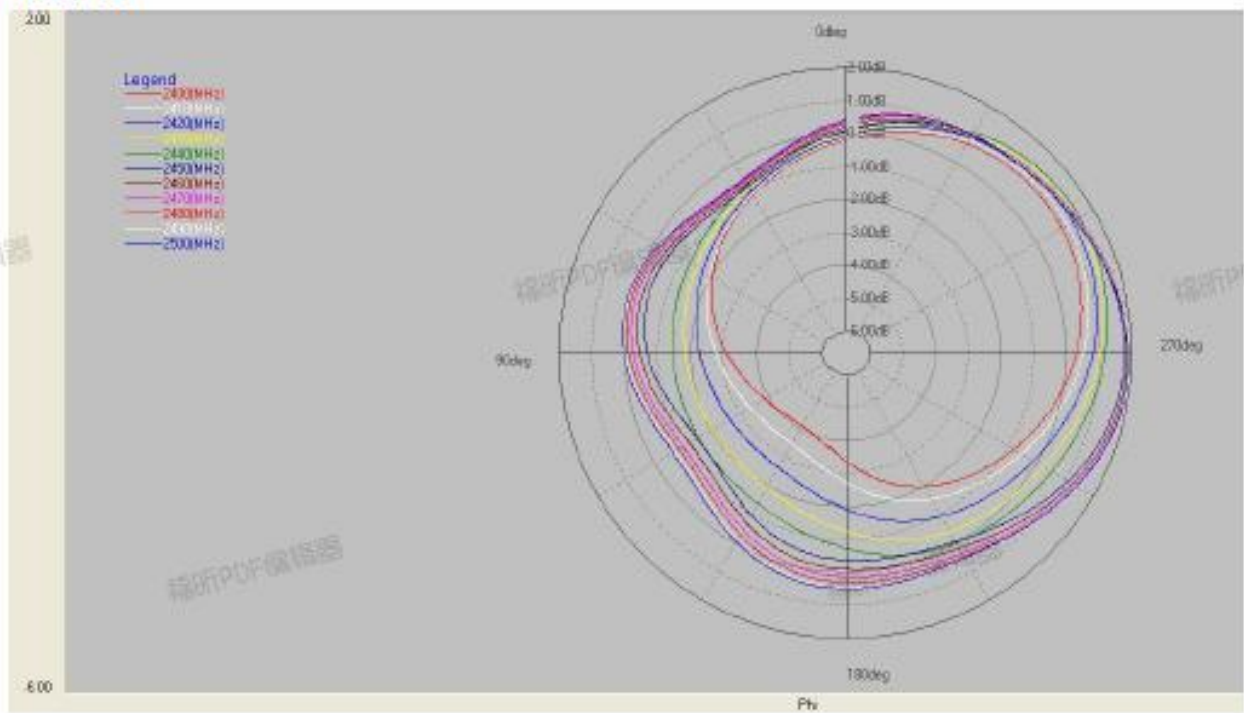
Testing Equipment Specification	
Microwave Chamber	ETS AMS-8923
Testing Equipment	Agilent E5071C

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.97	1.79	1.72	1.77	1.85	1.87	1.96	2.03	2.04	2.04	1.99

Phi=0°



Theta=90°

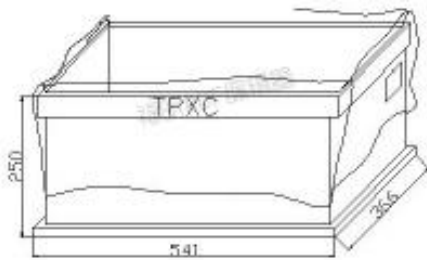


Packing Drawing

i. Put ANT into Plastic Tray



ii. Packing



Label

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

8Tray 320PCS/Box

iii. Sealing

