TP-LINK®

Antenna Specification

Product Number: 3101504160

Product Name: Antenna

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http://www.tp-link.com

Product Number: 3101504160

Product Name: Antenna

Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: / _____

Customer P/N : / _____

TP-LINK P/N: 3101504160 _____

Description:

Antenna|2.4-2.5GHz&5.15-5.85GHz|1.97dBi&0.97dBi|LP|Omni|2W|I-PEX|145mm|D1.37mm|Deco XE75| 无 |X3047-WI145REV1.0| 绿 色 | 否 ||[自 制 件 /3101504021 修改线长]

TP-LINK Checked By:
Customer Approved By:

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

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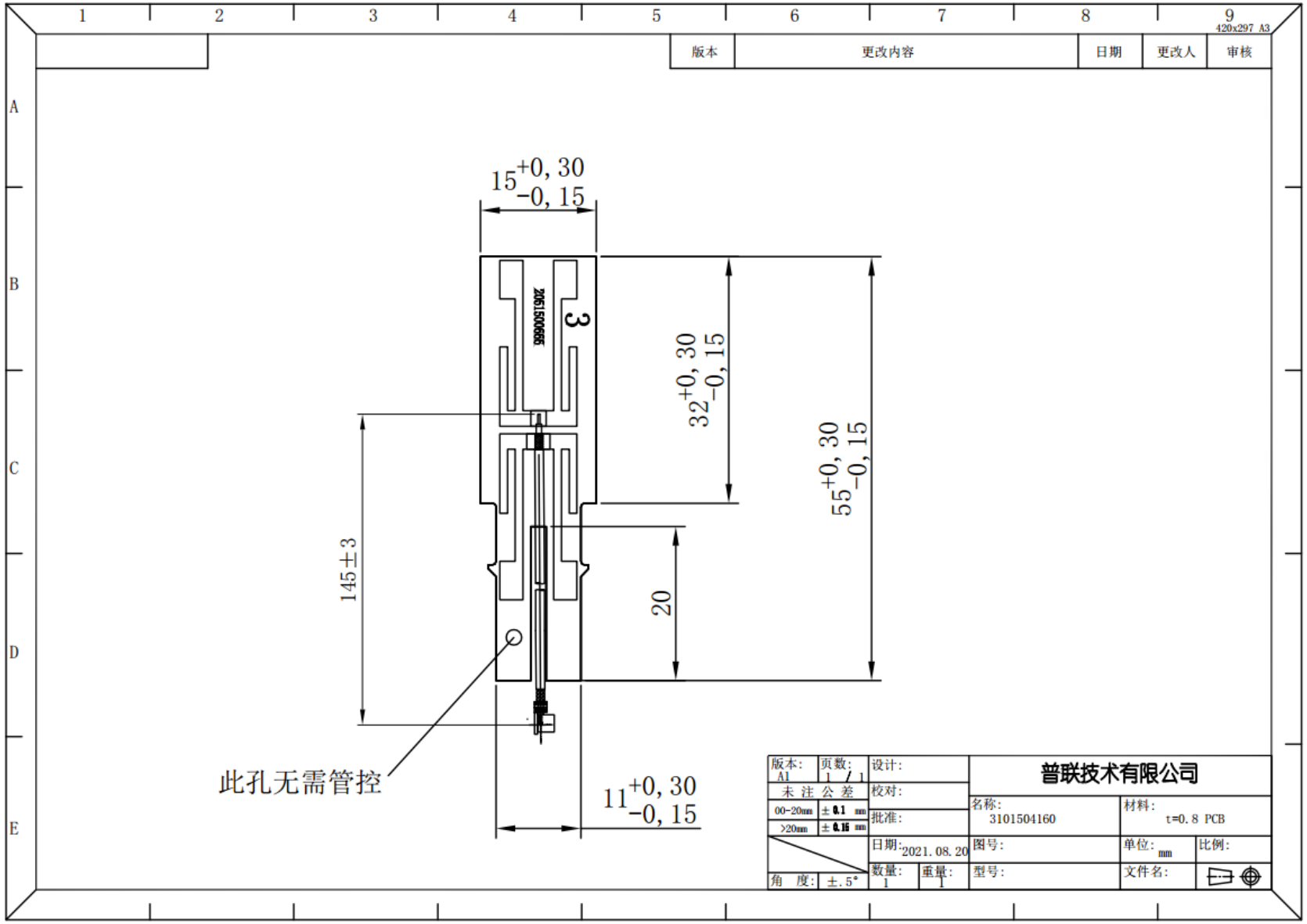
I. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500MHz&5150 ~ 5850MHz
Impedance	50 Ohm
S.W.R.	<= 2.0
Antenna Type	Dipole
Antenna Gain	1.97dBi & 0.97dBi
Max Input Power	2 W
Polarization	Linear
Radiation pattern	Omni-Directional
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	O.D. 1.37mm （Black）
Connector Type	I-PEX
Connector Pull Test	3Kg
C. Environmental	
Operation Temperature	- 40℃ ~ + 65℃
Storage Temperature	- 40℃ ~ + 70℃

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.FrequencyTol.<=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℃； 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℃; 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℃ (30 minutes) to +70℃ (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℃; Time: 8 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%

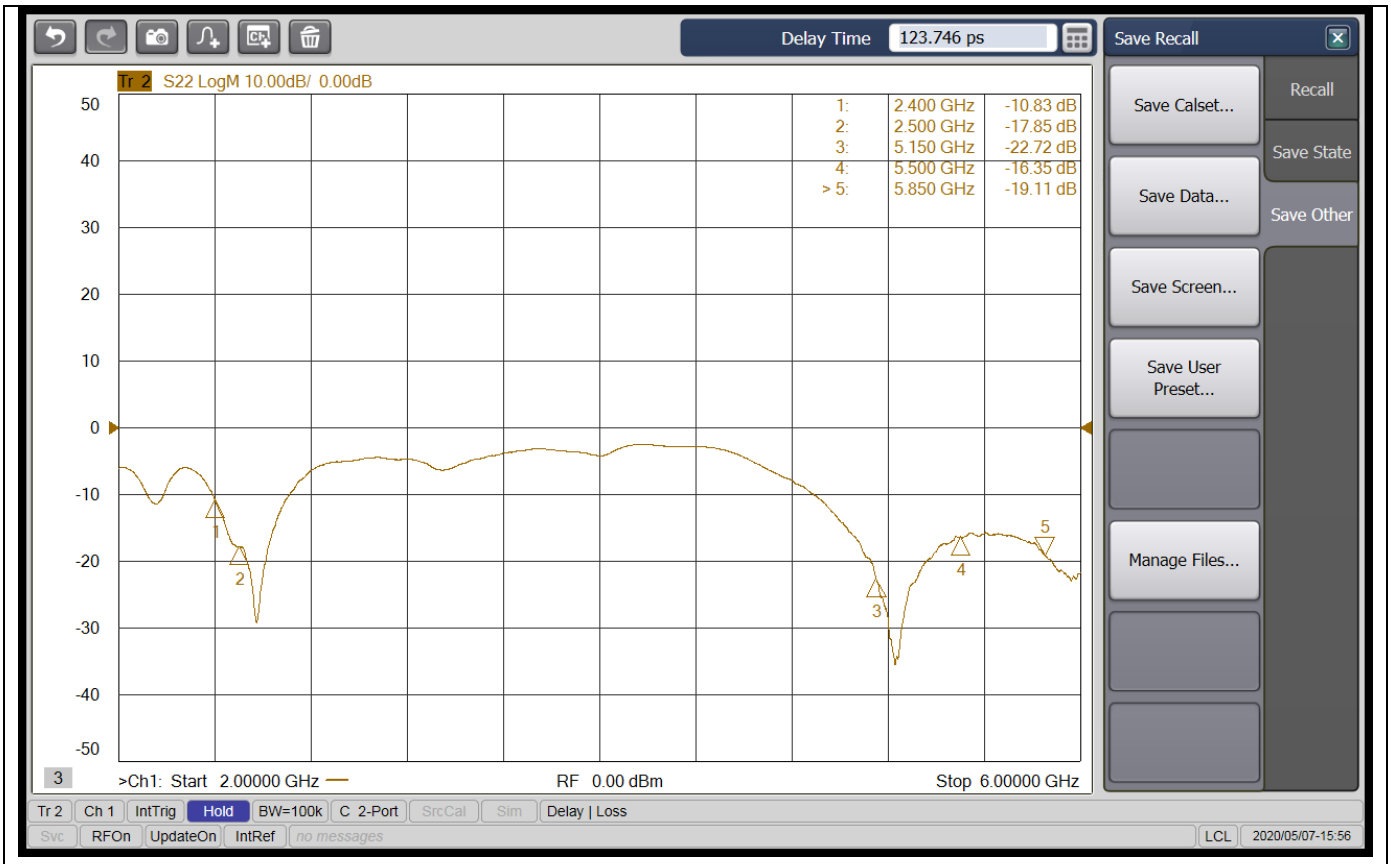
III. Mechanical Drawing and Material Description



IV. 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(Vl)	PBBs	PBDEs	PFOS	F	Cl	Br	I				
1	2051500666	PCB	FR-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.					SHAEC1200879510	2014/02/12	板材	SGS
			RS-2000 BGL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		135	256	N.D.	N.D.	RSH03G002208001C	2014/04/24	防焊油墨	CTI
			2M-400WF	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		148	124	N.D.	N.D.	CE/2014/80454	2014/08/12	文字油墨	SGS
			OSP F-005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.						CANEC1404310001	2014/04/08	OSP 药水	CTI
2	3110500018	RFConnec tor	Gold plating	N.D.	N.D.	N.D.	Negative			Negative					CE/2015/32675	2015/03/10	Plug Housing	SGS
			PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Negative	1110	N.D.	N.D.	N.D.	CE/2014/B2826	2014/11/18	Plug Housing	SGS
			Phosphor Bronze	N.D.	N.D.	N.D.	Negative			Negative					CE/2015/30055	2015/03/02	Plug Housing	SGS
7	3120500035	Cable	Inner conductor.	N.D.	46. .	N.D.	Negative	N.D.	N.D.	N.D.					SHAEC1507036516	2015/4/28	Cable	SGS 上海
			Insulation	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	>100000	N.D.	N.D.	N.D.	SHAEC1500664111	2015/1/21	Cable	SGS 上海
			Outer conductor	N.D.	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	广州SGS
			mesh	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ECL03G00367502E	2014/12/15	Cable	CTI
			jacket .	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	>100000	N.D.	N.D.	N.D.	SHAEC1500664109	2015/1/21	Cable	SGS 上海
			FEP color Masterbatch(black)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		>100000	N.D.	N.D.	N.D.	SHAEC1503900602	2015/03/18	Cable	SGS 上海

V. Antenna – S Parameter Test Data

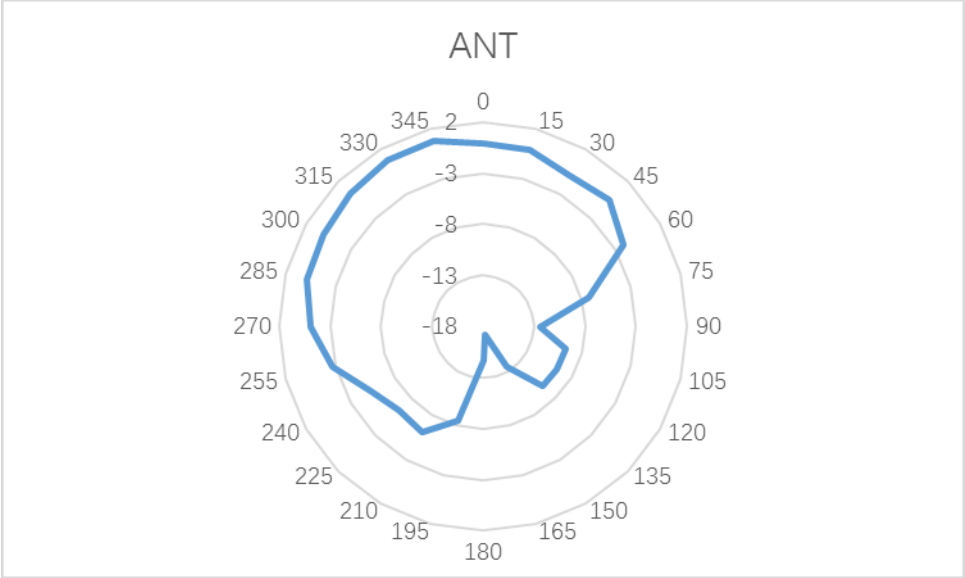


VI. Antenna – Radiation Pattern Test Data

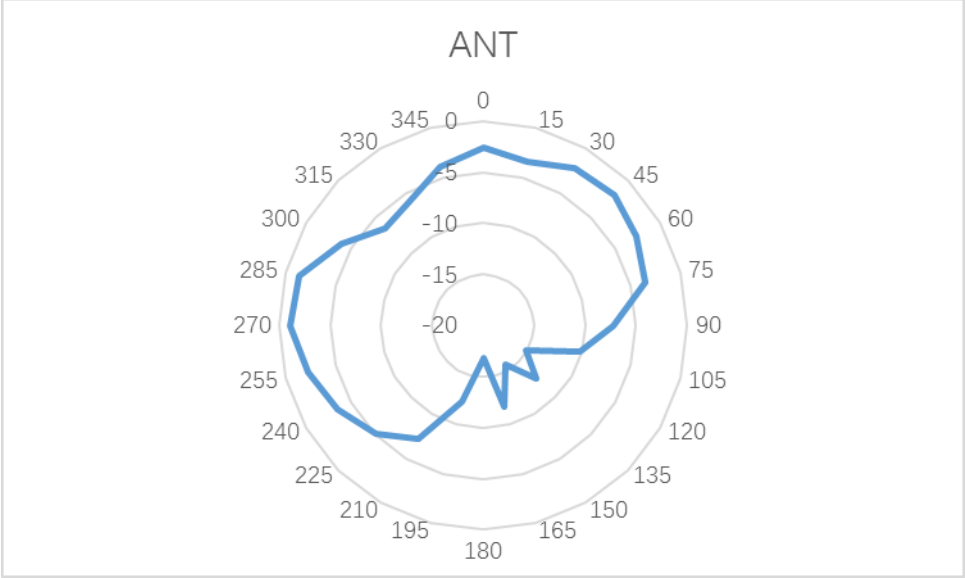
Testing Equipment Specification	
Microwave Chamber	Satimo SG24-S
Testing Equipment	Agilent 5071B

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.91	1.96	1.97	1.93	1.89	1.94	1.95	1.95	1.97	1.83	1.90
Freq. (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650
Peak Gain (dBi)	0.79	0.87	0.93	0.83	0.90	0.89	0.92	0.97	0.95	0.89	0.95
Freq. (MHz)	5700	5750	5800	5850							
Peak Gain (dBi)	0.92	0.93	0.91	0.89							

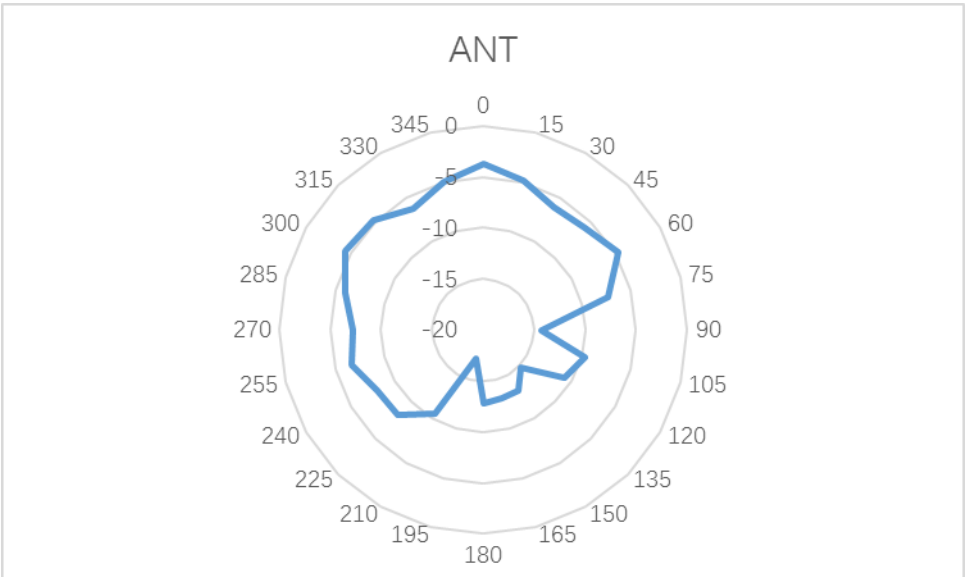
2.45GHz



5200MHz



5750MHz

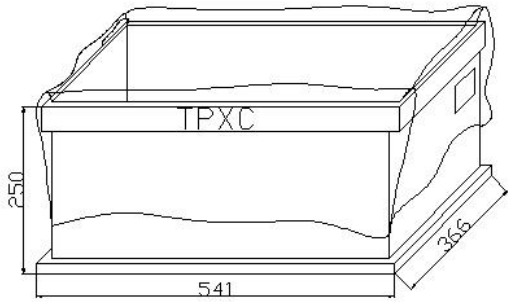


VII. Packing Drawing

ⅰ. Put ANT into Plastic Tray（仅作装箱说明）

200PCS/bag

ii. Packing

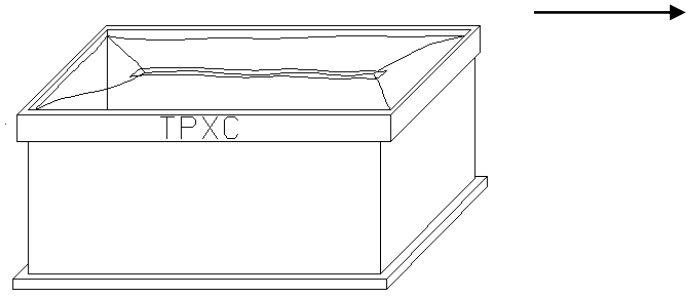


Label

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

2000PCS/Box

iii.Sealing



TP-LINK®

Antenna Specification

Product Number: 3101504161

Product Name: Antenna

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http://www.tp-link.com

Product Number: 3101504161

Product Name: Antenna

Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: / _____

Customer P/N : / _____

TP-LINK P/N: 3101504161 _____

Description:

Antenna|2.4-2.5GHz&5.15-5.85GHz|1.97dBi&0.97dBi|LP|Omni|2W|I-PEX|105mm|D1.13mm|Deco XE75|无|X3044-WI105REV1.0|绿色|否|[自制件/端子朝向需管控/3101504022 更改线长]

TP-LINK Checked By:
Customer Approved By:

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

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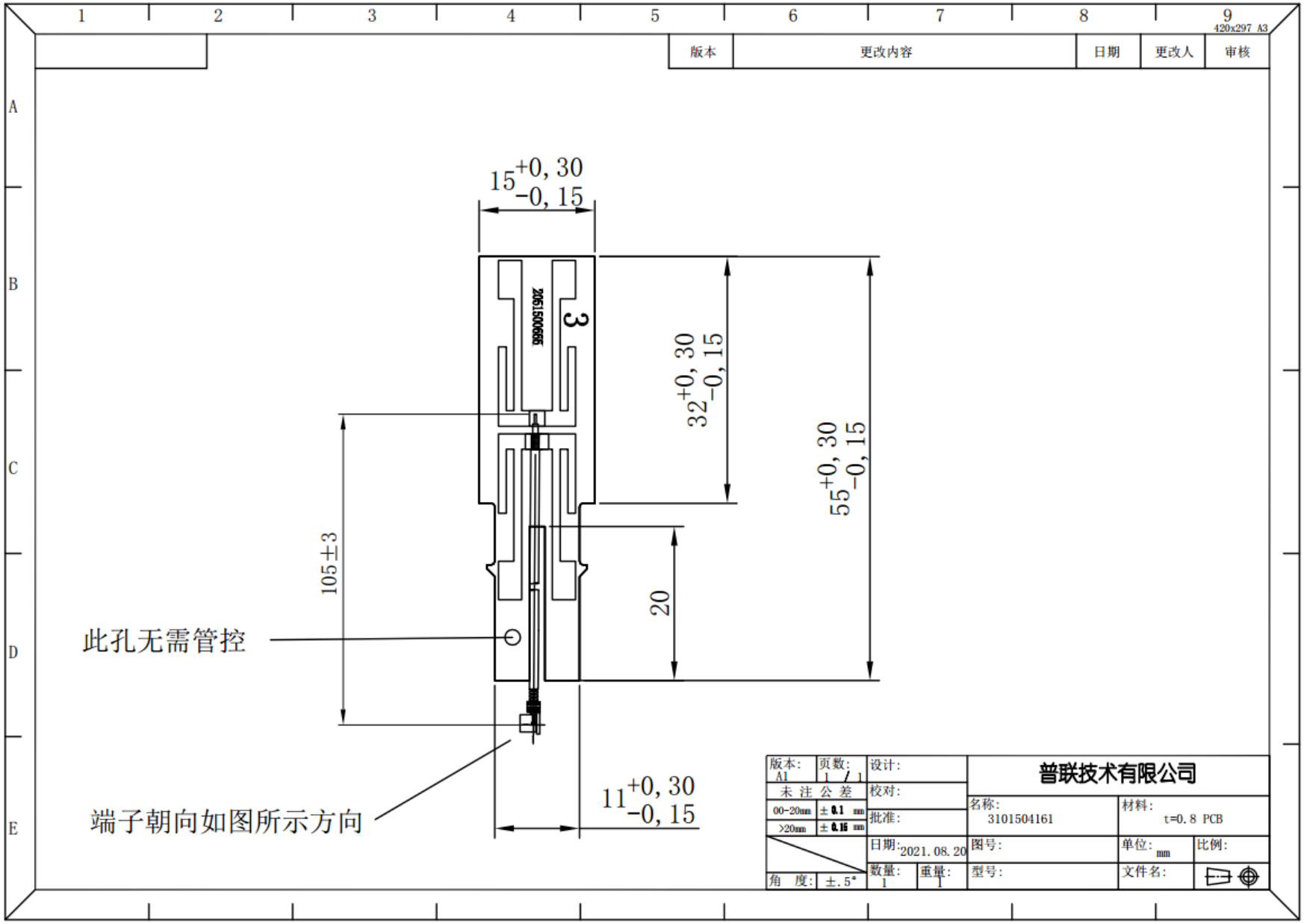
I. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500MHz&5150 ~ 5850MHz
Impedance	50 Ohm
S.W.R.	<= 2.0
Antenna Type	Dipole
Antenna Gain	1.97dBi & 0.97dBi
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 （Black）
Connector Type	I-PEX
Connector Pull Test	3Kg
C. Environmental	
Operation Temperature	- 40℃ ~ + 65℃
Storage Temperature	- 40℃ ~ + 70℃

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.FrequencyTol.<=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℃； 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℃; 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℃ (30 minutes) to +70℃ (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℃; Time: 8 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%

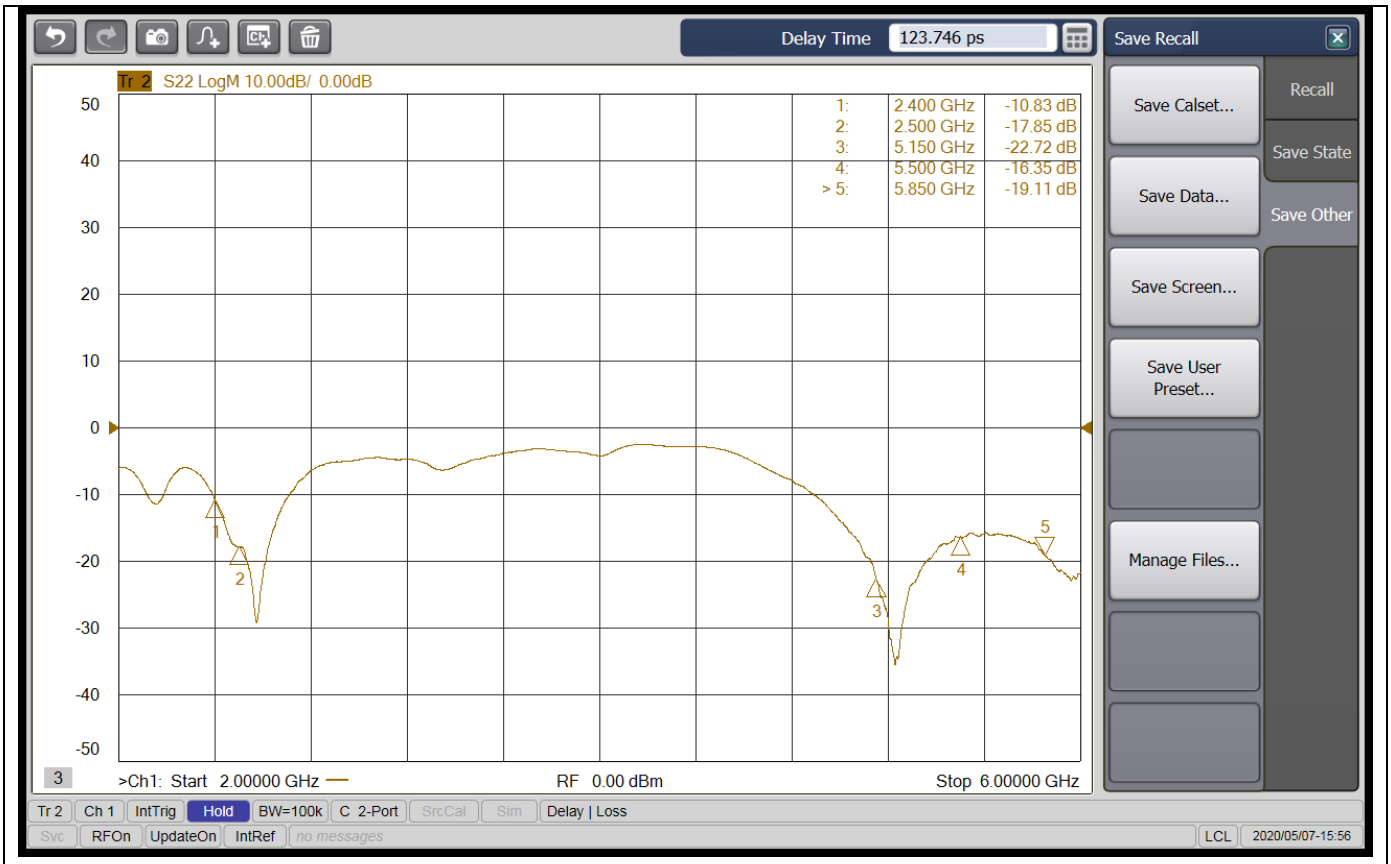
III. Mechanical Drawing and Material Description



IV. 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(Vl)	PBBs	PBDEs	PFOS	F	Cl	Br	I				
1	2051500666	PCB	FR-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.					SHAEC1200879510	2014/02/12	板材	SGS
			RS-2000 BGL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		135	256	N.D.	N.D.	RSH03G002208001C	2014/04/24	防焊油墨	CTI
			2M-400WF	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		148	124	N.D.	N.D.	CE/2014/80454	2014/08/12	文字油墨	SGS
			OSP F-005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.						CANEC1404310001	2014/04/08	OSP 药水	CTI
2	3110500018	RFConnec tor	Gold plating	N.D.	N.D.	N.D.	Negative			Negative					CE/2015/32675	2015/03/10	Plug Housing	SGS
			PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Negative	1110	N.D.	N.D.	N.D.	CE/2014/B2826	2014/11/18	Plug Housing	SGS
			Phosphor Bronze	N.D.	N.D.	N.D.	Negative			Negative					CE/2015/30055	2015/03/02	Plug Housing	SGS
7	3120500035	Cable	Inner conductor.	N.D.	46. .	N.D.	Negative	N.D.	N.D.	N.D.					SHAEC1507036516	2015/4/28	Cable	SGS 上海
			Insulation	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	>100000	N.D.	N.D.	N.D.	SHAEC1500664111	2015/1/21	Cable	SGS 上海
			Outer conductor	N.D.	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	广州SGS
			mesh	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ECL03G00367502E	2014/12/15	Cable	CTI
			jacket .	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	>100000	N.D.	N.D.	N.D.	SHAEC1500664109	2015/1/21	Cable	SGS 上海
			FEP color Masterbatch(black)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		>100000	N.D.	N.D.	N.D.	SHAEC1503900602	2015/03/18	Cable	SGS 上海

V. Antenna – S Parameter Test Data

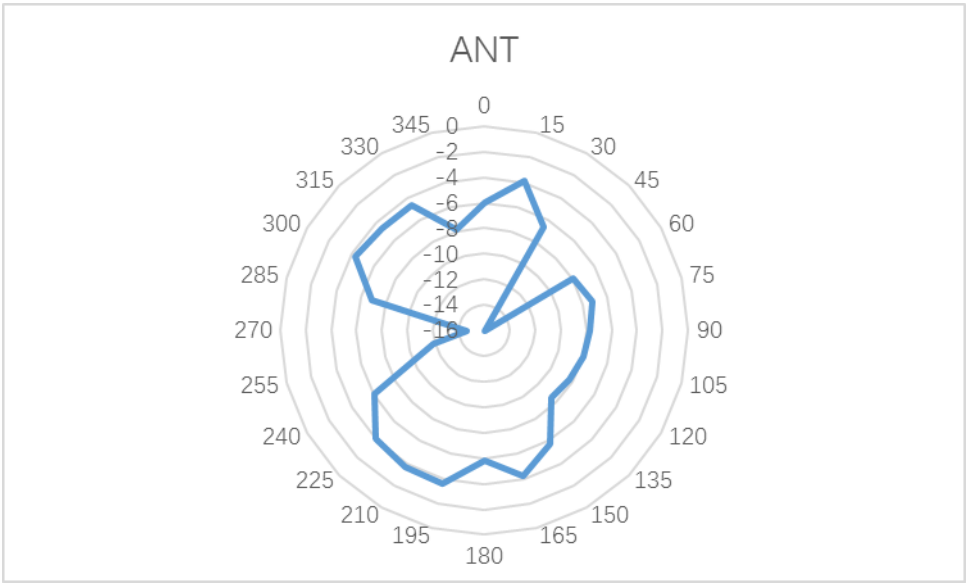


VI. Antenna – Radiation Pattern Test Data

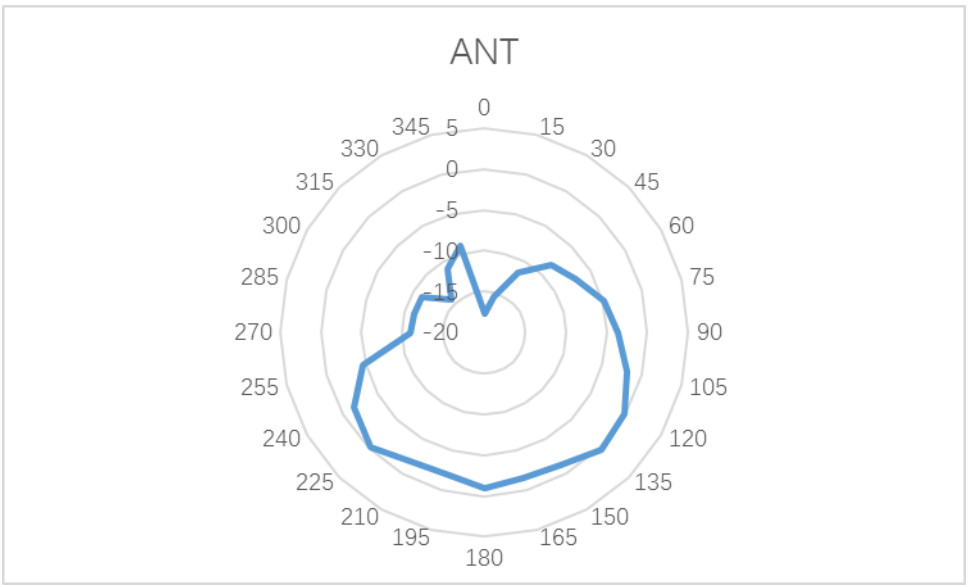
Testing Equipment Specification	
Microwave Chamber	Satimo SG24-S
Testing Equipment	Agilent 5071B

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.93	1.96	1.97	1.95	1.92	1.89	1.97	1.85	1.94	1.95	1.90
Freq. (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650
Peak Gain (dBi)	0.89	0.91	0.94	0.94	0.93	0.89	0.97	0.91	0.94	0.90	0.89
Freq. (MHz)	5700	5750	5800	5850							
Peak Gain (dBi)	0.94	0.89	0.82	0.80							

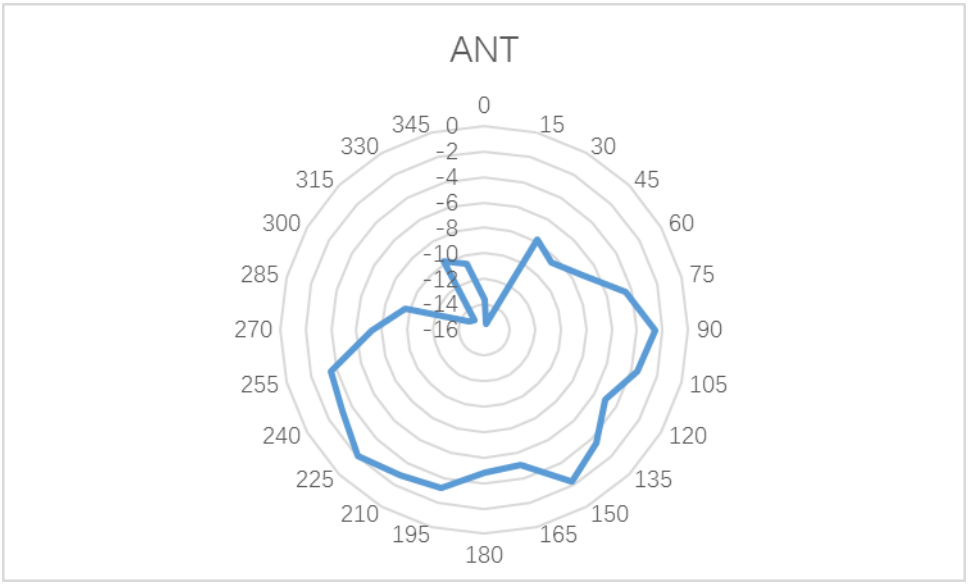
2.45GHz



5200MHz



5750MHz

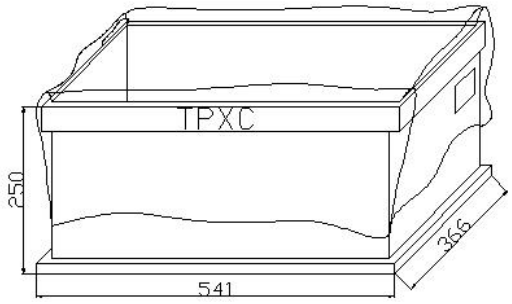


VII. Packing Drawing

ⅰ. Put ANT into Plastic Tray（仅作装箱说明）

200PCS/bag

ii. Packing

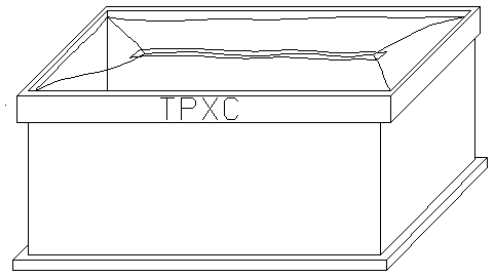


Label

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

2000PCS/Box

iii.Sealing



TP-LINK®

TP-LINK®

Antenna Specification

Product Number: 3101504515

Product Name: Antenna

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http://www.tp-link.com

Product Number: 3101504515

Product Name: Antenna

Specification for Approval

Date: _____

File No.: _____

Version: 1.0

Customer: /

Customer P/N: /

TP-LINK P/N: 3101504515

Description:

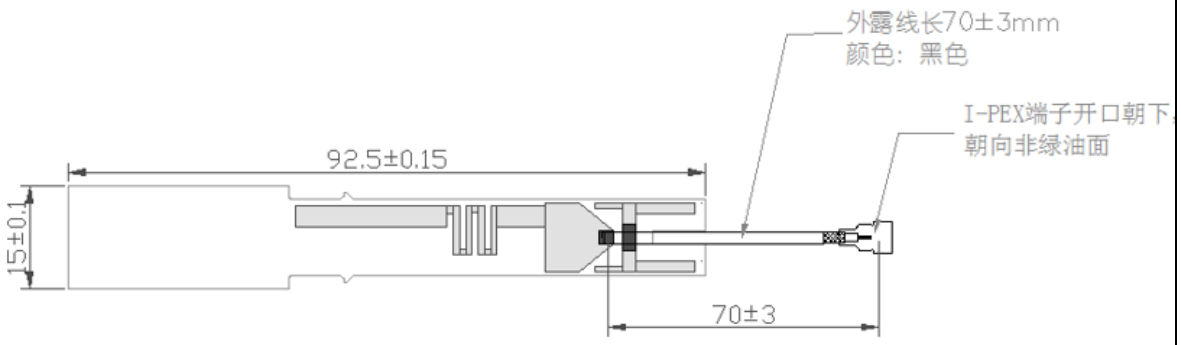
Antenna|5.5-5.85GHz|1.62dBi|LP|Omni|2W|I-PEX|70mm|D1.13mm|Deco X75|无|X2070-WI070REV1.0|绿色|否|[自制件/PTFE 材质]

TP-LINK Checked By:
Customer Approved By:

TP-LINK TECHNOLOGIES CO., LTD.
South Building, 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

Table of Contents

1. Specification

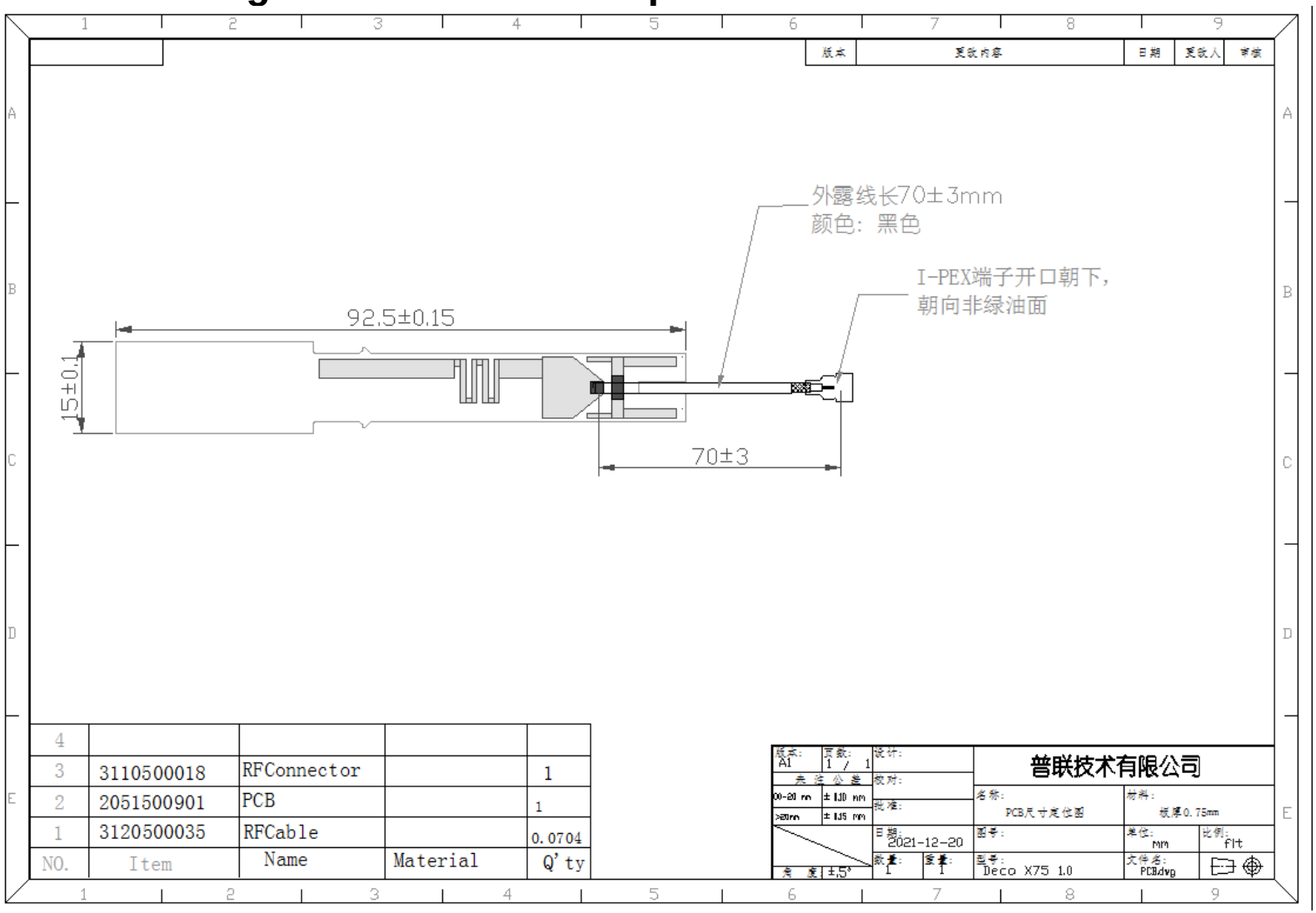
Sample Photo	
	
A. Electrical Characteristics	
Frequency	5.5~5.85GHz
Impedance	50 Ohm
VSWR	≤ 2.0
Antenna Gain	1.62dBi@5.5~5.85GHz
Max Input Power	≤ 2W
Polarization	Linear
Radiation pattern	Omni-Directional
B. Material & Mechanical Characteristics	
Material of Radiator	PCB(PTFE+Cu)
Cable Type	O.D. 1.13mm (Black)
Connector Type	I-PEX
Connector Pull Test	1.5 kg
C. Environmental Characteristics	
Operation Temperature	-10℃ ~ +60℃
Storage Temperature	-40℃ ~ +70℃

2. Characteristics and Reliability Test

Test Items	Test Condition and Procedure	Requirements

C1	**VSWR**	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.FrequencyTol.<=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℃; 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℃ (30 minutes) to +70℃ (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%
E3	**Life (High Temp.)**	MIL-STD-202G,108A, cond. A Temp: 70℃; Time: 8 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%

3. Mechanical Drawing and Material Description



NO.	Item	Name	Material	Q'ty
4				
3	3110500018	RFConnector		1
2	2051500901	PCB		1
1	3120500035	RFCable		0.0704

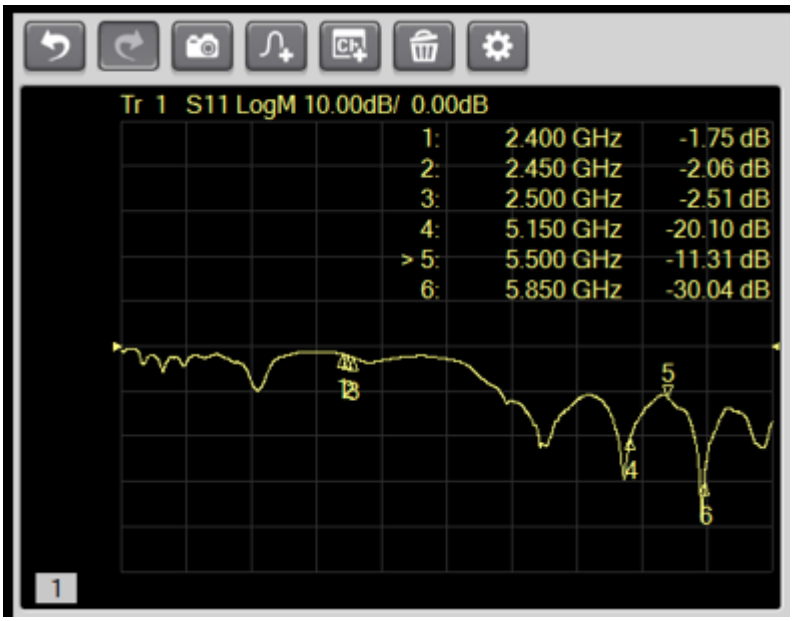
普联技术有限公司

注：IPEX 朝向需管控，开口朝下，朝向非绿油面

4. 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(Vl)	PBBs	PBDEs	PFOS	F	Cl	Br	I				
1	3120500035	Cable	Skin	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		374000	N.D	N.D	N.D	RLSHD000593720060	2011/04/25	Cable	CTI
			Isolated layer	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		372000	N.D	N.D	N.D	RLSHD000593720060	2011/04/25	Cable	CTI
			Mesh	N.D.	N.D.	N.D.	Negative								RLSHD000593720060	2011/04/25	Cable	CTI
			Center Yarn	N.D.	N.D.	N.D.	Negative								RLSHD000593720060	2011/04/25	Cable	CTI
3	2051500901	PCB	CEM-1	N.D.	5	N.D.	N.D.	N.D.	N.D.		50mg/kg	50mg/kg	50mg/kg	50mg/kg	NO.CANEC1512596206	2015/08/03	Sub	广州 SGS
4	3110500018	RFConnector	Gold plating	N.D.	N.D.	N.D.	Negative			Negative					CE/2015/32675	2015/03/10	Plug Housing	SGS
			PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Negative	1110	N.D.	N.D.	N.D.	CE/2014/B2826	2014/11/18	Plug Housing	SGS
			Phosphor Bronze	N.D.	N.D.	N.D.	Negative			Negative					CE/2015/30055	2015/03/02	Plug Housing	SGS

5. Antenna S-Parameters Measurement Data



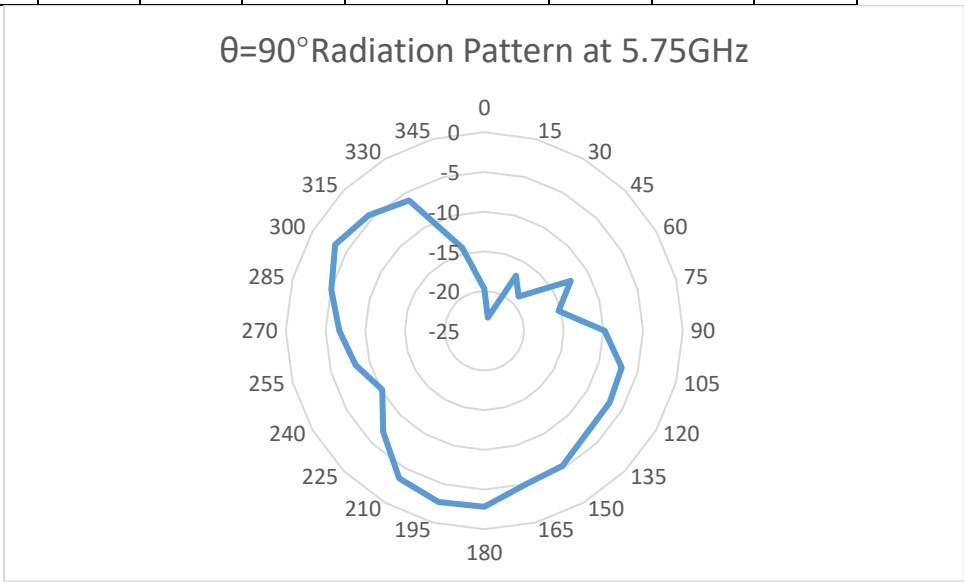
以上 S 参数为天线配合 Deco X75(2-pack)(US) 1.0 整机的测试数据。

6. Antenna Radiation Pattern Measurement Data

Measurement Equipment Specification	
Microwave Chamber	ETS AMS-8923
Vector Network Analyzer	Agilent E5071C

5150~5850MHz

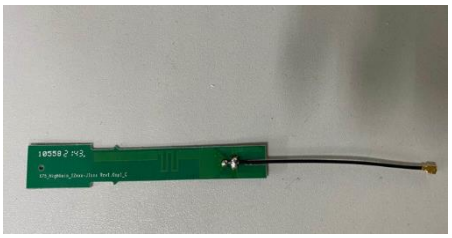
Freq. (GHz)	5.50	5.55	5.60	5.65	5.70	5.75	5.80	5.85
Ant Effi. (%)	73.10	73.10	75.69	75.83	77.56	79.35	81.96	82.82
Ant Gain (dBi)	0.41	0.06	0.38	0.49	0.96	1.11	1.43	1.62



以上方向图测试结果为天线配合 Deco X75(2-pack)(US) 1.0 整机的测试数据。

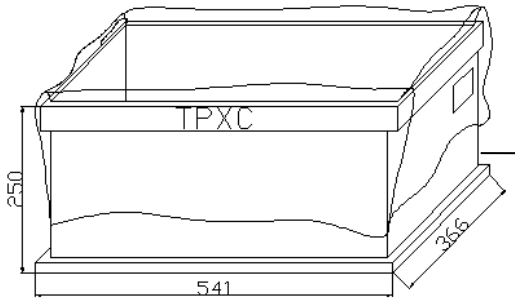
7. Packing Drawing

i. Put Antennas into Plastic Tray（仅用作装箱说明）



100PCS/Package

ii.Packing

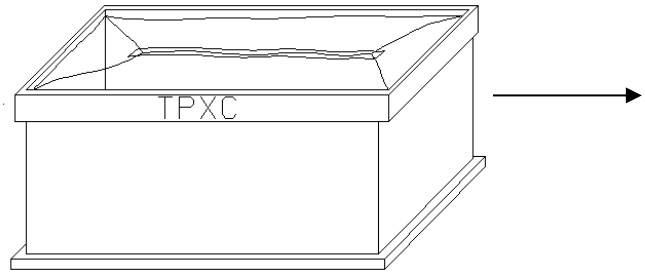


L

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

20Bags，2000PCS/Box

iii.Sealing



Product Number: 3101504518

Product Name: Antenna

TP-LINK®

TP-LINK®

Antenna Specification

Product Number: 3101504518

Product Name: Antenna

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http://www.tp-link.com

Product Number: 3101504518

Product Name: Antenna

Specification for Approval

Date: _____

File No.: _____

Version: 1.0

Customer: /

Customer P/N: /

TP-LINK P/N: 3101504518

Description:

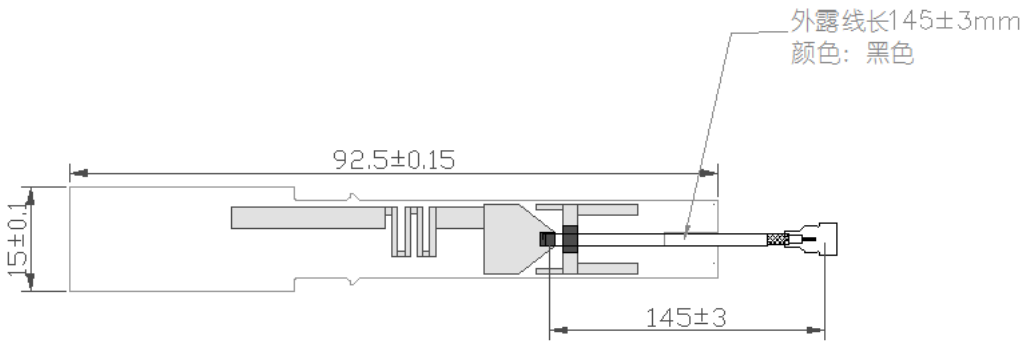
Antenna|5.5-5.85GHz|2.54dBi|LP|Omni|2W|I-PEX|145mm|D1.37mm|Deco X75|无|X2070-WI145REV1.0|绿色|否|[自制件/PTFE 材质]

TP-LINK Checked By:
Customer Approved By:

TP-LINK TECHNOLOGIES CO., LTD.
South Building, 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

Table of Contents

1. Specification

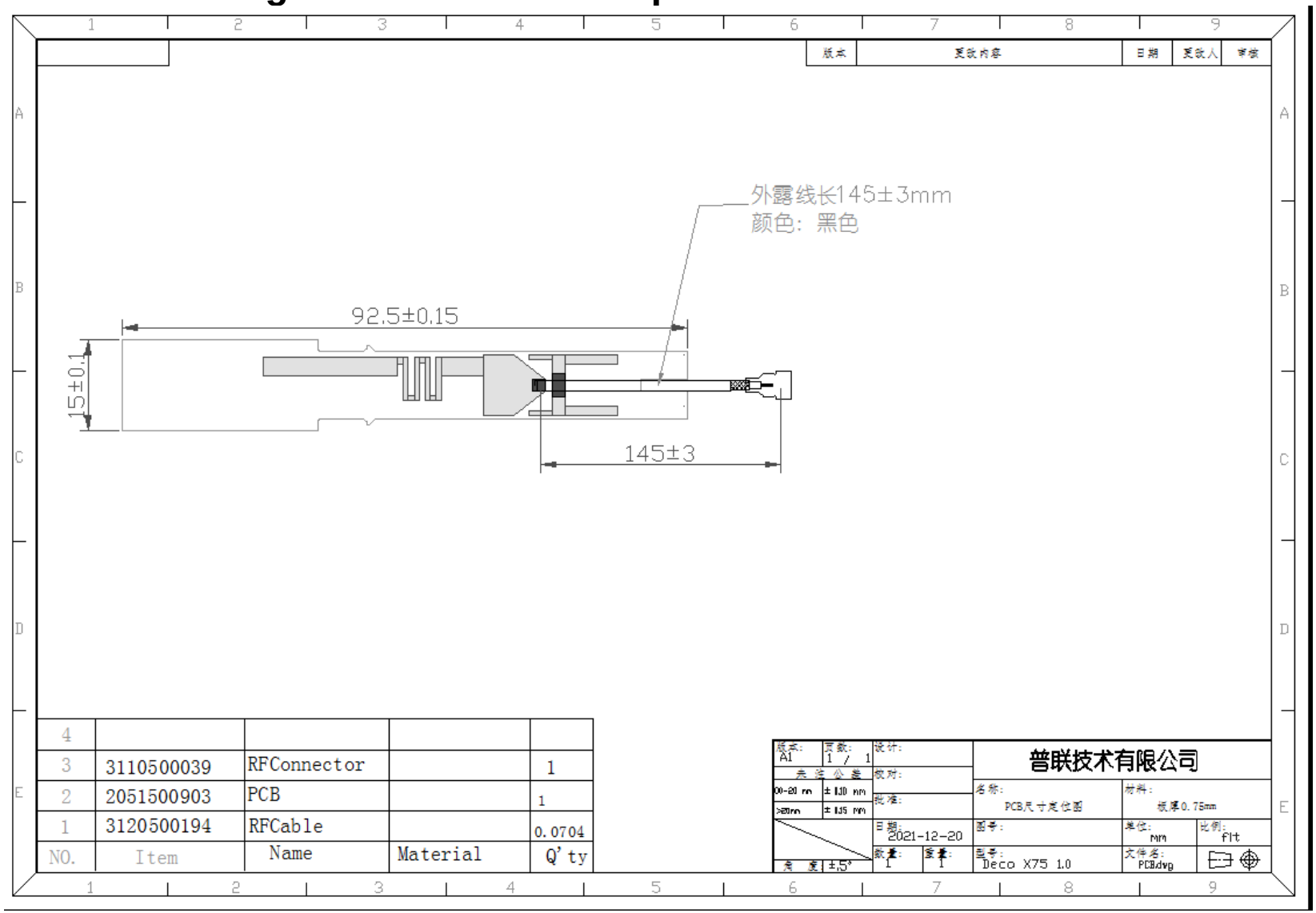
Sample Photo	
	
A. Electrical Characteristics	
Frequency	5.5~5.85GHz
Impedance	50 Ohm
VSWR	≤ 2.0
Antenna Gain	2.54dBi@5.5~5.85GHz
Max Input Power	≤ 2W
Polarization	Linear
Radiation pattern	Omni-Directional
B. Material & Mechanical Characteristics	
Material of Radiator	PCB(PTFE+Cu)
Cable Type	O.D. 1.37mm (Black)
Connector Type	I-PEX
Connector Pull Test	1.5 kg
C. Environmental Characteristics	
Operation Temperature	-10℃ ~ +60℃
Storage Temperature	-40℃ ~ +70℃

2. Characteristics and Reliability Test

Test Items	**Test Condition and Procedure**	**Requirements**

C1	**VSWR**	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.FrequencyTol.<=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℃; 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℃ (30 minutes) to +70℃ (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%
E3	**Life (High Temp.)**	MIL-STD-202G,108A, cond. A Temp: 70℃; Time: 8 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%

3. Mechanical Drawing and Material Description



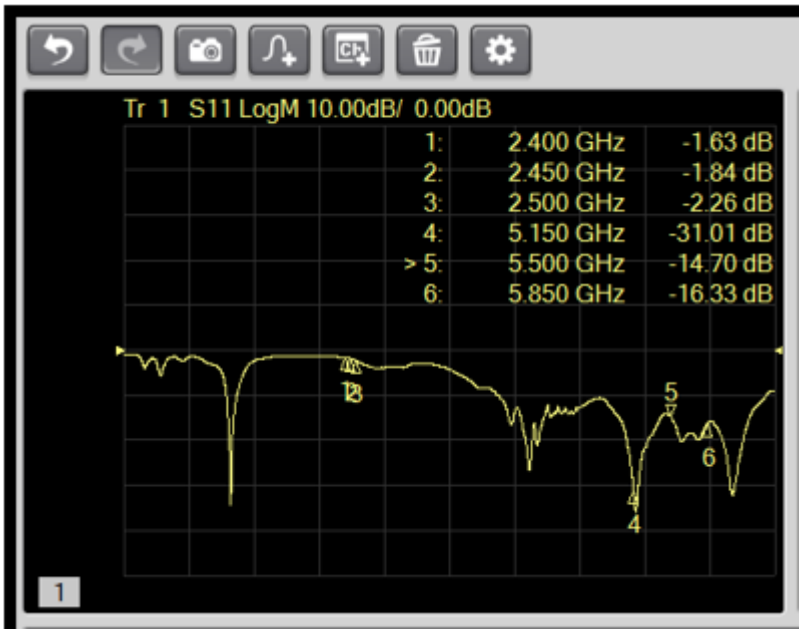
NO.	Item	Name	Material	Q'ty
4				
3	3110500039	RFConnector		1
2	2051500903	PCB		1
1	3120500194	RFCable		0.0704

普联技术有限公司

4. 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(Vl)	PBBs	PBDEs	PFOS	F	Cl	Br	I				
1	3120500194	Cable	Skin	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		374000	N.D	N.D	N.D	RLSHD000593720060	2011/04/25	Cable	CTI
			Isolated layer	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		372000	N.D	N.D	N.D	RLSHD000593720060	2011/04/25	Cable	CTI
			Mesh	N.D.	N.D.	N.D.	Negative								RLSHD000593720060	2011/04/25	Cable	CTI
			Center Yarn	N.D.	N.D.	N.D.	Negative								RLSHD000593720060	2011/04/25	Cable	CTI
2	2051500903	PCB	CEM-1	N.D.	5	N.D.	N.D.	N.D.	N.D.		50mg/kg	50mg/kg	50mg/kg	50mg/kg	NO.CANEC1512596206	2015/08/03	Sub	广州 SGS
3	3110500039	RFConnector	Gold plating	N.D.	N.D.	N.D.	Negative			Negative					CE/2015/32675	2015/03/10	Plug Housing	SGS
			PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Negative	1110	N.D.	N.D.	N.D.	CE/2014/B2826	2014/11/18	Plug Housing	SGS
			Phosphor Bronze	N.D.	N.D.	N.D.	Negative			Negative					CE/2015/30055	2015/03/02	Plug Housing	SGS

5. Antenna S-Parameters Measurement Data



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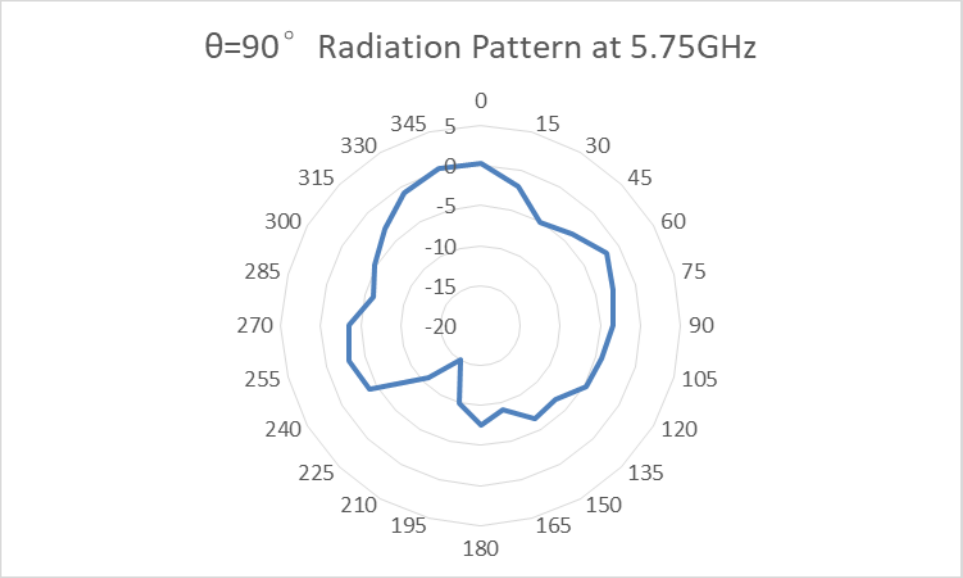
6. Antenna Radiation Pattern Measurement Data

Measurement Equipment Specification	
Microwave Chamber	ETS AMS-8923
Vector Network Analyzer	Agilent E5071C

5150~5850MHz

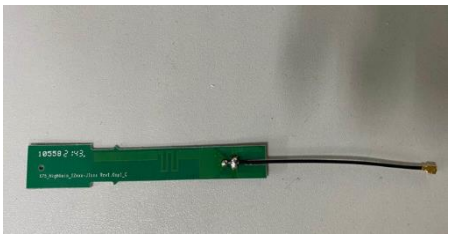
Freq. (GHz)	5.50	5.55	5.60	5.65	5.70	5.75	5.80	5.85
Ant Effi. (%)	23.81	25.86	29.49	32.25	36.31	38.58	35.70	31.88
Ant Gain (dBi)	0.61	0.67	0.95	1.54	2.14	2.54	2.25	1.61



以上方向图测试结果为天线配合 Deco X75(2-pack)(US) 1.0 整机的测试数据。

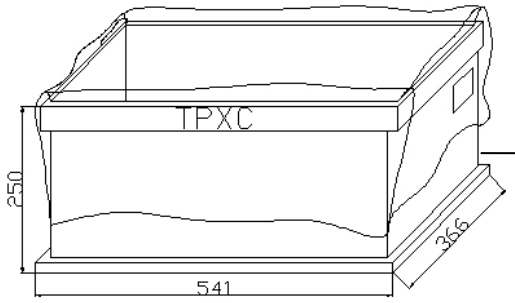
7. Packing Drawing

i. Put Antennas into Plastic Tray（仅用作装箱说明）



100PCS/Package

ii.Packing



L

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

20Bags，2000PCS/Box

iii.Sealing