

TP-LINK®

Antenna Specification



Product Number: 3101504783

Product Name: Antenna

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

Product Number: 3101504783

Product Name: Antenna

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Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: _____ / _____

Customer P/N : _____ / _____

TP-LINK P/N: 3101504783

Description:

Antenna|2.4-2.5GHz&5.15-5.85GHz|2.0dBi&1.0dBi|LP|Omni|2W|I-PEX|140
mm|D1.37mm|Deco X80|无||3045-J1140REV1.0|绿色|否|[灰色线/自制件]

TP-LINK Checked By:
Customer Approved By:

TP-LINK®

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

Index

I.	Specification	1
II.	Characteristics and Reliability Test.....	1
III.	Mechanical Drawing and Material Description	3
IV.	RoHS Test Report	4
V.	Antenna – S Parameter Test Data.....	5
VI.	Antenna – Radiation Pattern Test Data	5
VII.	Packing Drawing	7

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	2.0dBi & 1.0dBi
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℃ ~ + 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

Product Number: 3101504783

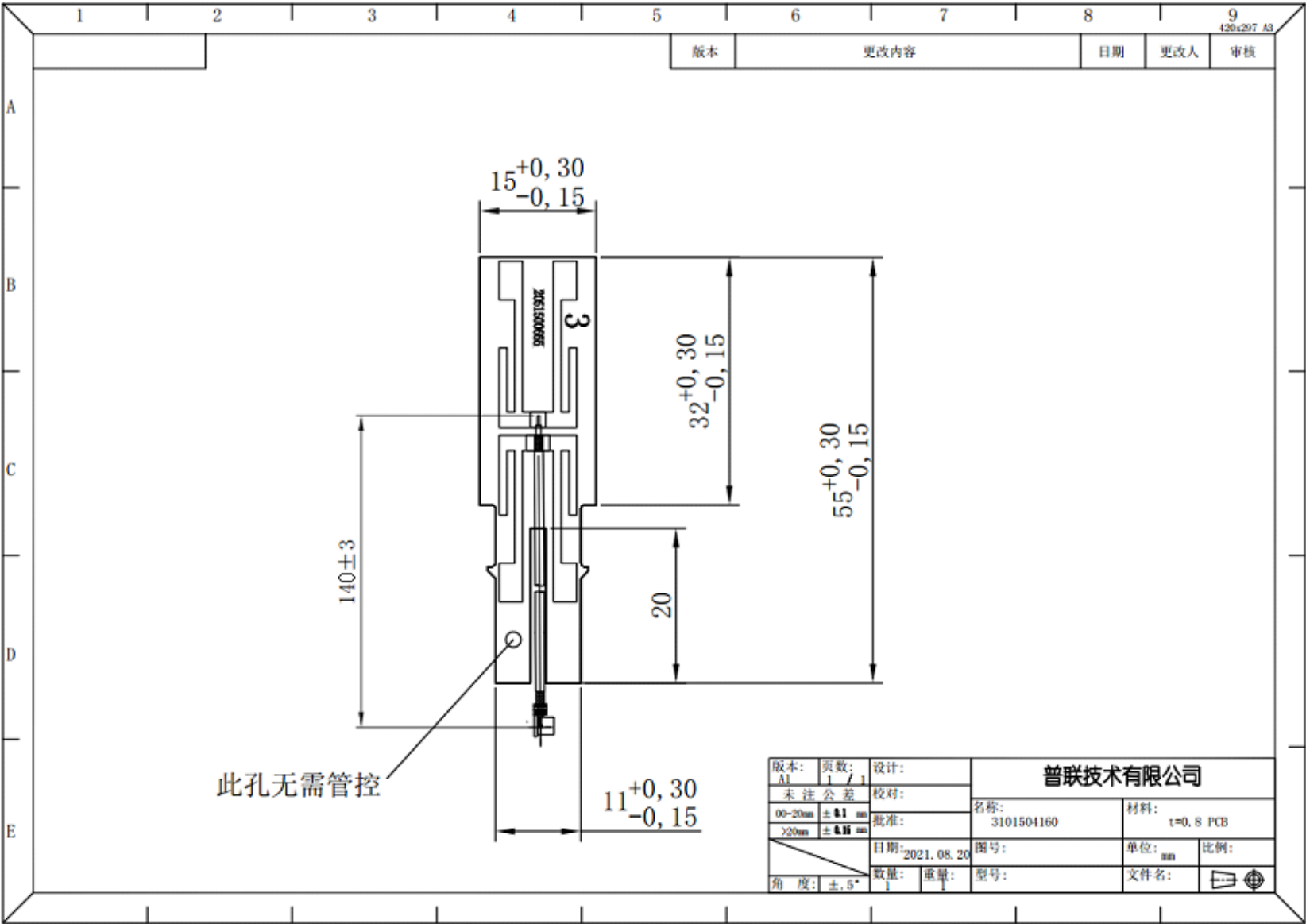
Product Name: Antenna

TP-LINK®

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℃; 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



Product Number: 3101504783

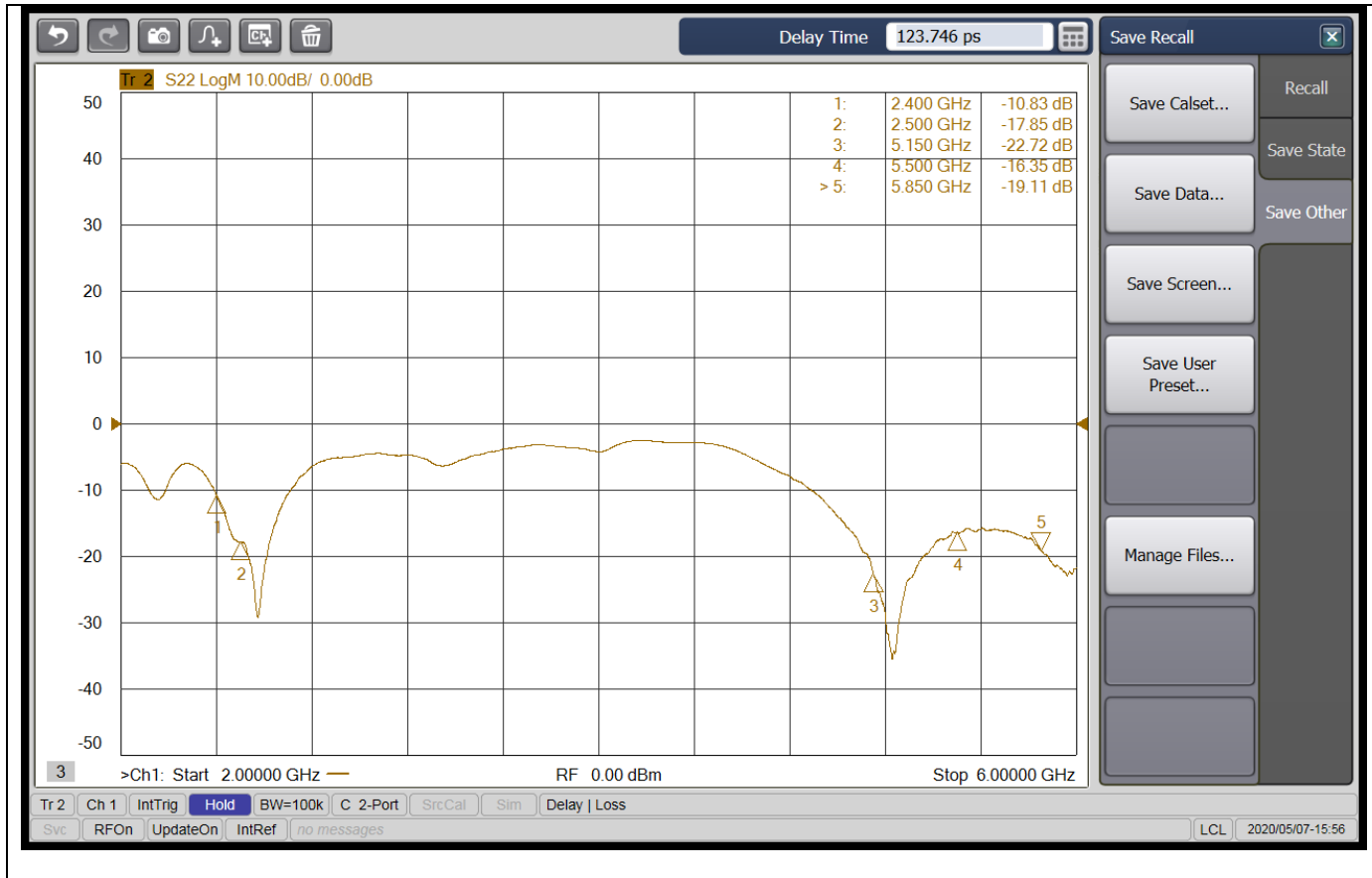
Product Name: Antenna



IV. RoHS Test Report

N O .	Product Model	Constit uents	Material	Test Result for RoHS-corresponding Substance						PFOS	Halogen				Series No.	Date	Title	Test Agent
				Cd	Pb	Hg	Cr(VI)	PBB s	PBD Es	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-400W F	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	3110500039	RFConn ec 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	3120500195	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 Masterbat ch(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

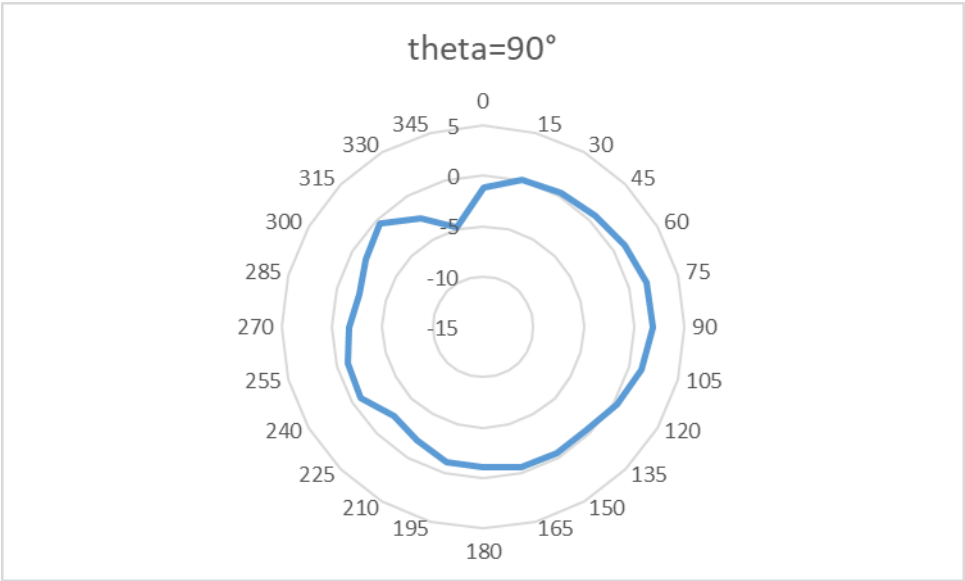


VI. Antenna – Radiation Pattern Test Data

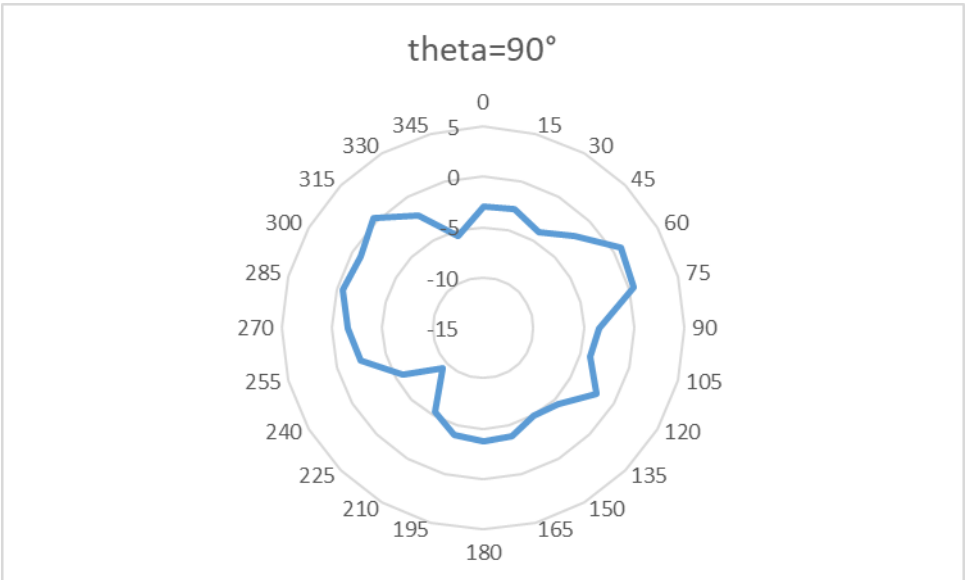
Testing Equipment Specification	
Microwave Chamber	Satimo SG24-S
Testing Equipment	Agilent 5071B

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.87	1.89	1.91	1.96	1.88	1.90	1.90	1.84	1.81	1.82	1.79
Freq. (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650
Peak Gain (dBi)	0.96	0.84	0.87	0.94	0.84	0.78	0.65	0.93	0.73	0.80	0.63
Freq. (MHz)	5700	5750	5800	5850							
Peak Gain (dBi)	0.61	0.42	0.31	0.55							

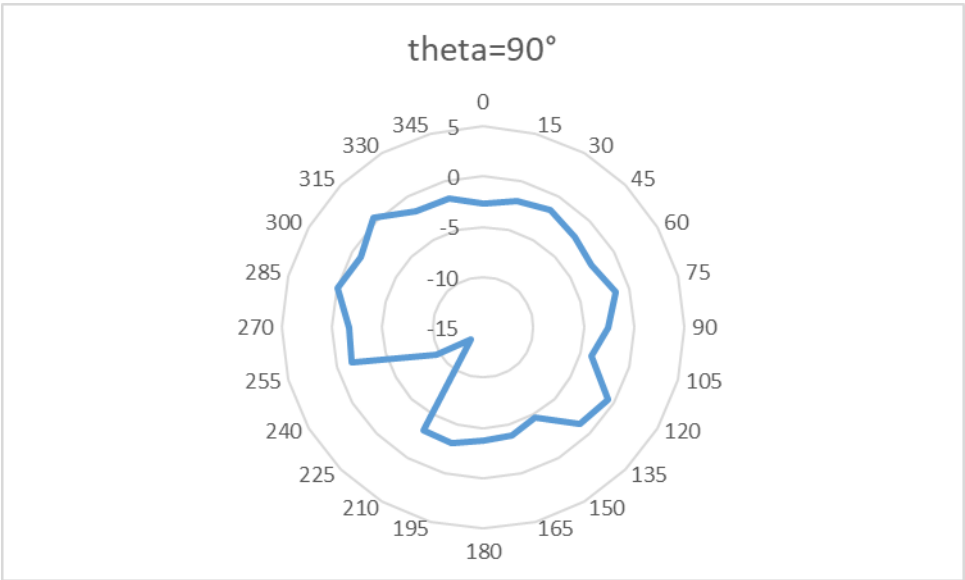
2450MHz



5200MHz



5750MHz



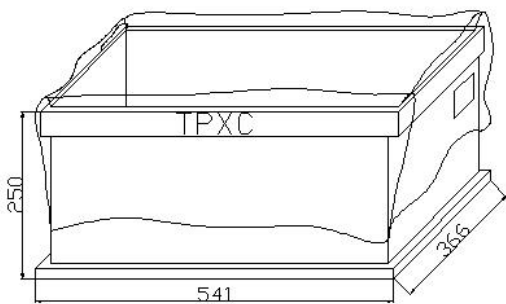
VII. Packing Drawing

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



200PCS/bag

ii. Packing

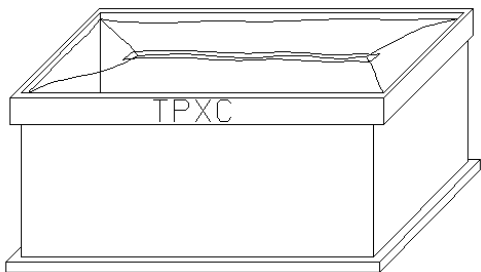


2000PCS/Box

Label

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

iii.Sealing



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TP-LINK P/N: 3101504784

Description:

Antenna|2.4-2.5GHz&5.15-5.85GHz|2.0dBi&1.0dBi|LP|Omni|2W|I-PEX|145
mm|D1.37mm|Deco X80|无||3045-J1145REV1.0|绿色|否|[黑色线/自制件]

TP-LINK Checked By:
Customer Approved By:

TP-LINK®

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Index

I.	Specification	1
II.	Characteristics and Reliability Test.....	1
III.	Mechanical Drawing and Material Description	3
IV.	RoHS Test Report	4
V.	Antenna – S Parameter Test Data.....	5
VI.	Antenna – Radiation Pattern Test Data	5
VII.	Packing Drawing	7

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	2.0dBi & 1.0dBi
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

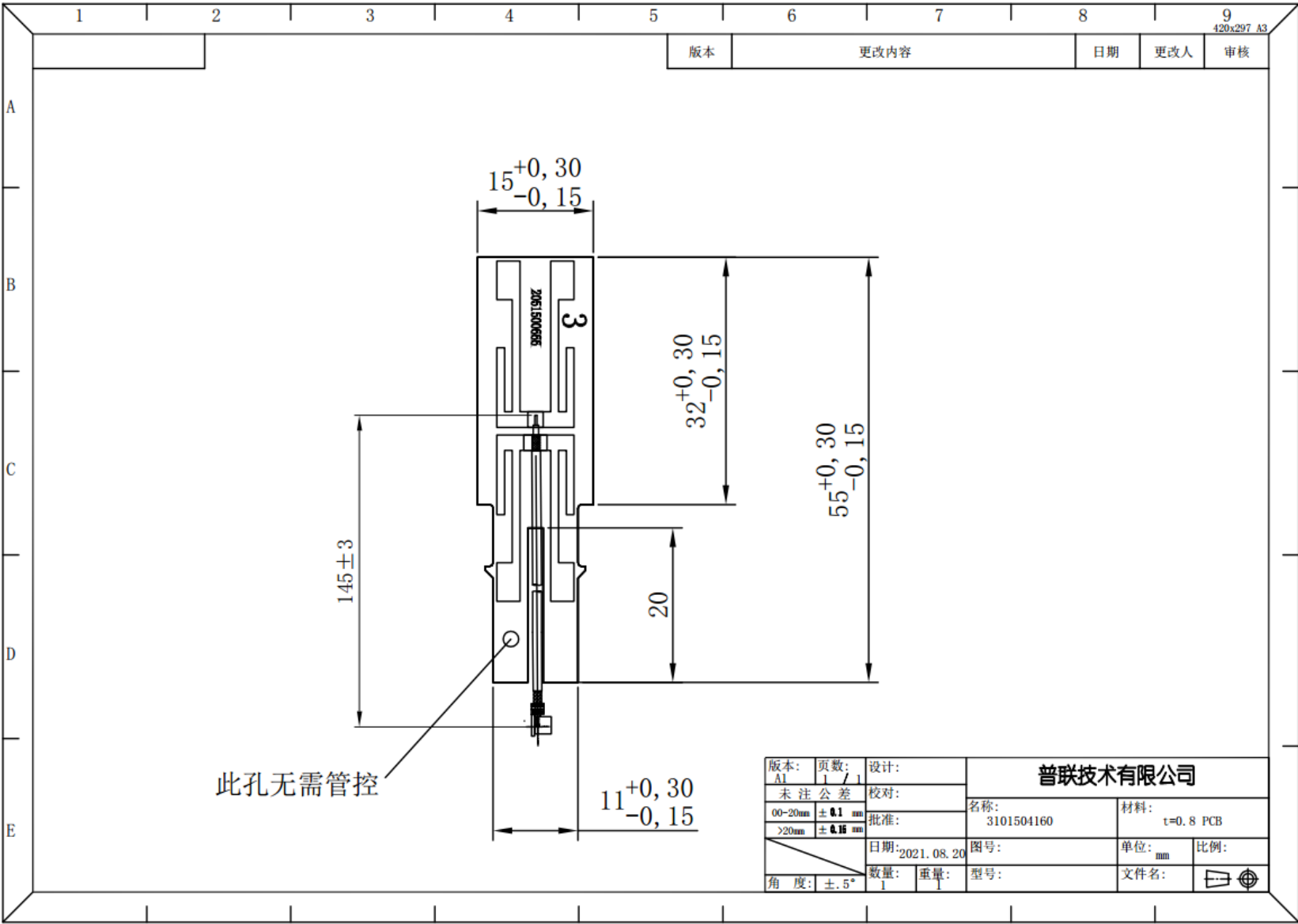
Product Number: 3101504784

Product Name: Antenna

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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℃; 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	1 Cycle: -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



Product Number: 3101504784

Product Name: Antenna



IV. RoHS Test Report

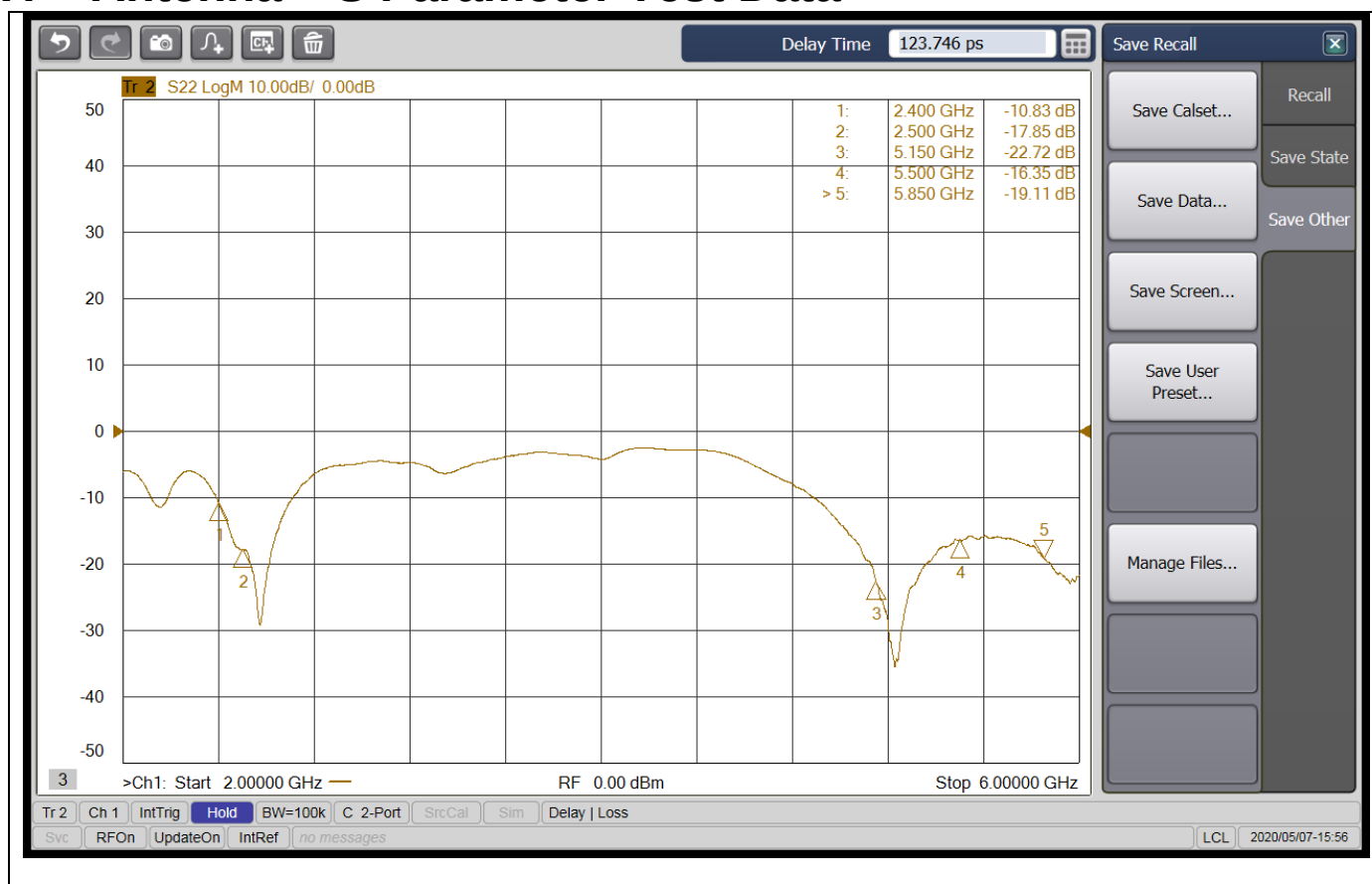
N O .	Product Model	Constit uents	Material	Test Result for RoHS-corresponding Substance						PFOS	Halogen				Series No.	Date	Title	Test Agent
				Cd	Pb	Hg	Cr(VI)	PBB s	PBD Es	PFOS	F	Cl	Br	I				
1	2051500666	PCB	FR-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.					SHAEC1200879510	2014/02/12	板材	SGS
			RS-2000 BGL	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-400W F	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	3110500039	RFConn ec 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	3120500194	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 Masterbat ch(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

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V. Antenna – S Parameter Test Data

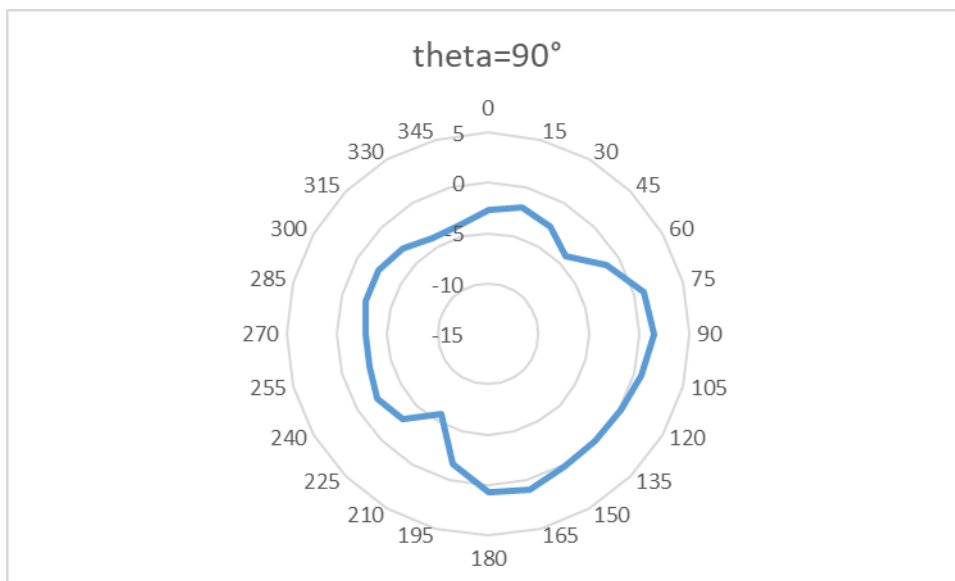


VI. Antenna – Radiation Pattern Test Data

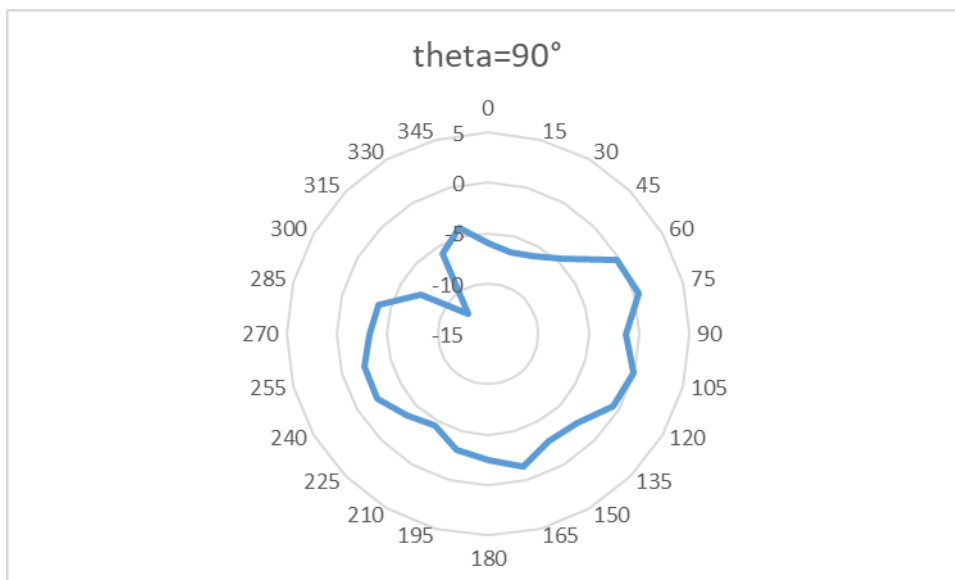
Testing Equipment Specification	
Microwave Chamber	Satimo SG24-S
Testing Equipment	Agilent 5071B

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.74	1.81	1.76	1.73	1.43	1.46	1.56	1.76	1.79	1.86	1.93
Freq. (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650
Peak Gain (dBi)	0.86	0.46	0.54	0.55	0.59	0.64	0.74	0.83	0.86	0.91	0.83
Freq. (MHz)	5700	5750	5800	5850							
Peak Gain (dBi)	0.88	0.92	0.91	0.97							

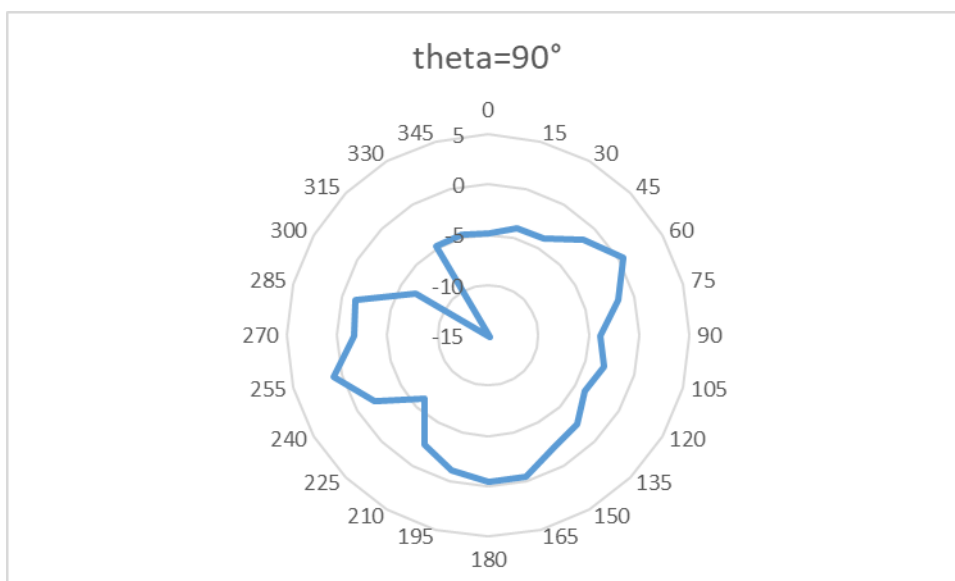
2450MHz



5200MHz



5750MHz



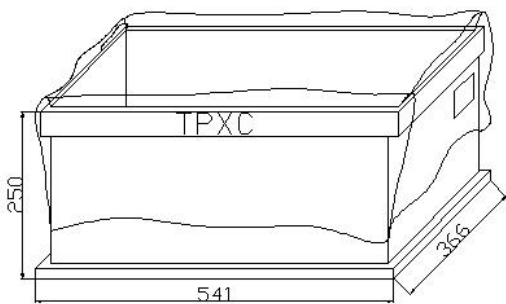
VII. Packing Drawing

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



200PCS/bag

ii. Packing

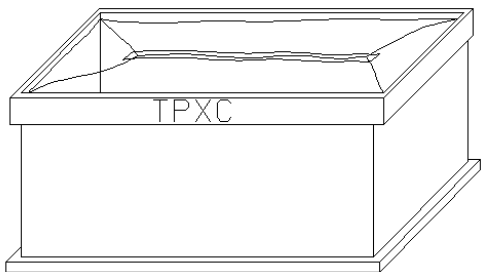


2000PCS/Box

Label

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

iii.Sealing



TP-LINK®

Antenna Specification



Product Number: 3101504785

Product Name: Antenna

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Specification For Approval

Date: _____

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Description:

Antenna|2.4-2.5GHz&5.15-5.85GHz|2.0dBi&1.0dBi|LP|Omni|2W|I-PEX|95
mm|D1.13mm|Deco X80|无|I3045-JI095REV1.0|绿色|否|[蓝色线/自制件]

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Customer Approved By:

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Index

I.	Specification	1
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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	2.0dBi & 1.0dBi
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℃ ~ + 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

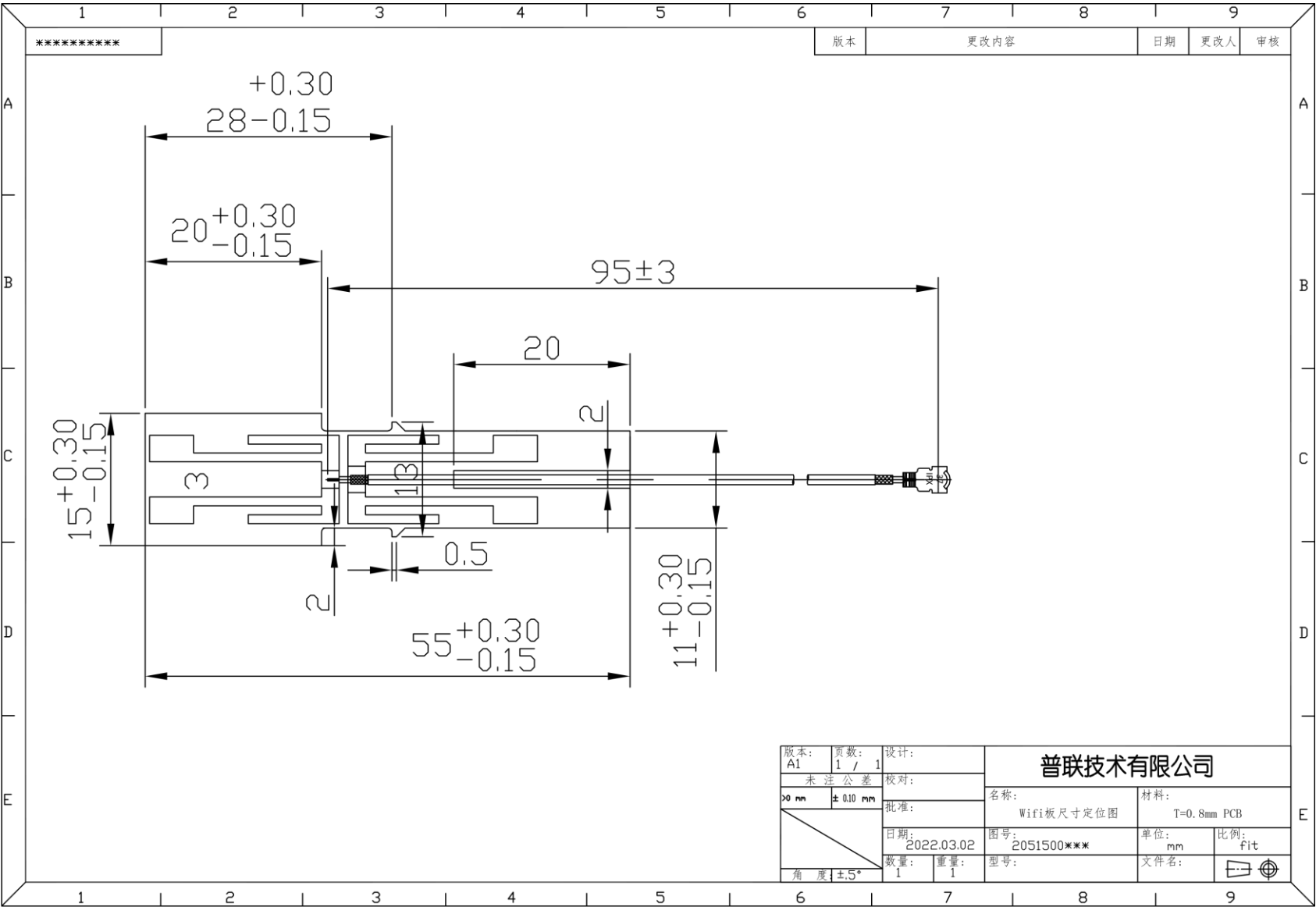
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M5	Terminal- Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol. <=5%
M6	Bend Test	3 angles: 0° ,45° ,90° .100 times for each angle	1. No Visual 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



Product Number: 3101504785

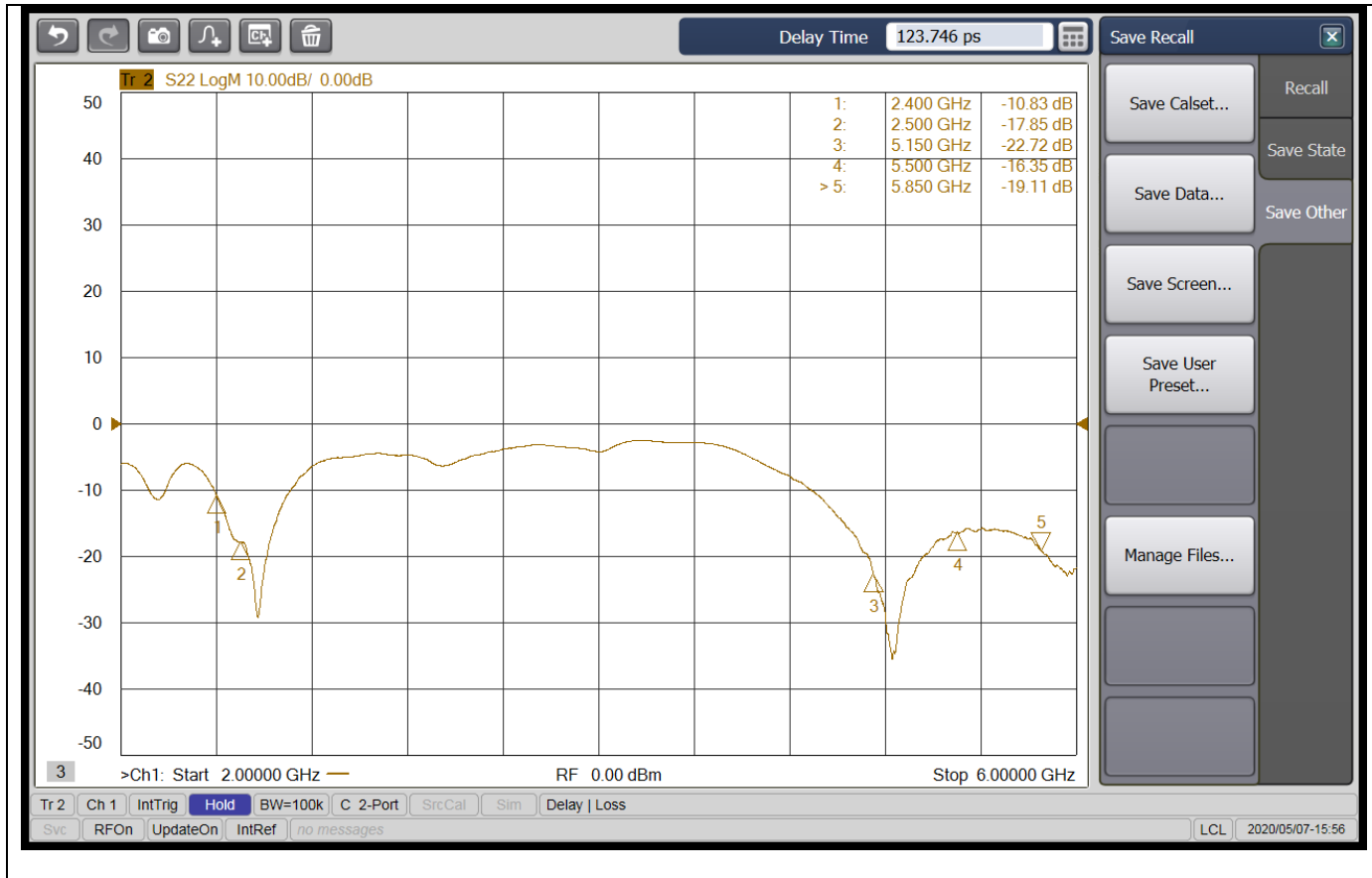
Product Name: Antenna



IV. RoHS Test Report

N O .	Product Model	Constit uents	Material	Test Result for RoHS-corresponding Substance						PFOS	Halogen				Series No.	Date	Title	Test Agent
				Cd	Pb	Hg	Cr(VI)	PBB s	PBD Es	PFOS	F	Cl	Br	I				
1	2051500960	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-400W F	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	RFConn ec 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	3120500334	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 Masterbat ch(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

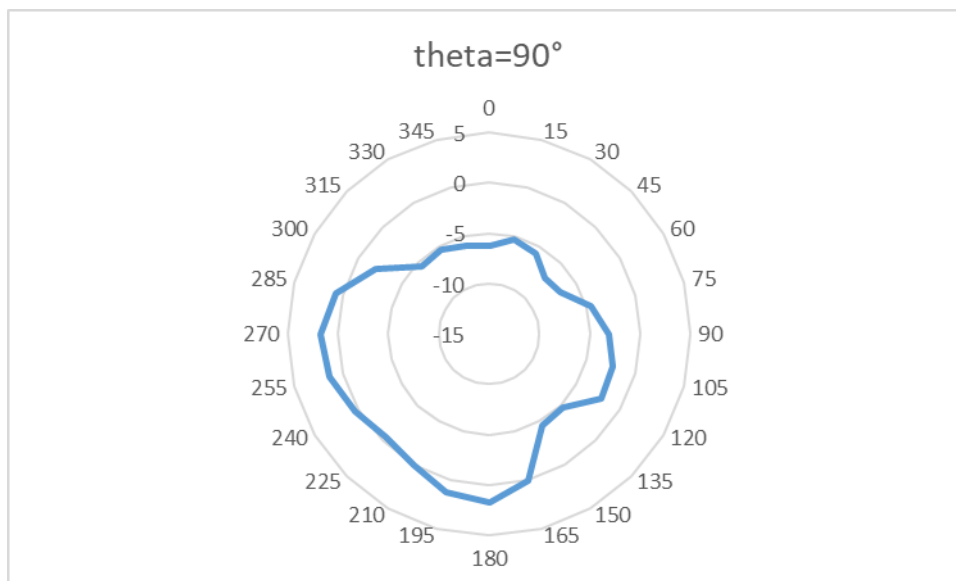


VI. Antenna – Radiation Pattern Test Data

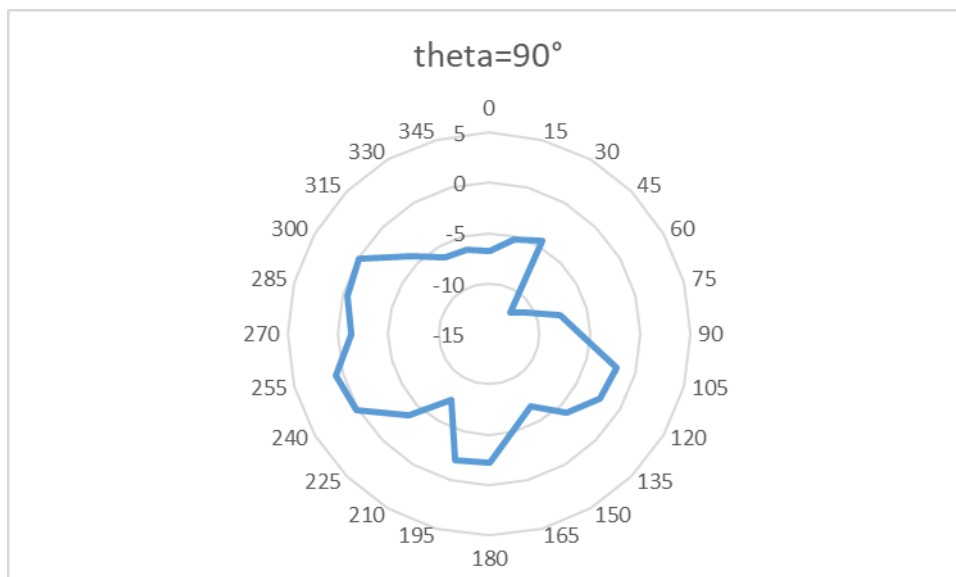
Testing Equipment Specification	
Microwave Chamber	Satimo SG24-S
Testing Equipment	Agilent 5071B

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.65	1.74	1.86	1.91	1.88	1.76	1.67	1.65	1.43	1.21	1.19
Freq. (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650
Peak Gain (dBi)	0.76	0.77	0.74	0.81	0.88	0.71	0.86	0.91	0.99	0.97	0.95
Freq. (MHz)	5700	5750	5800	5850							
Peak Gain (dBi)	0.93	0.88	0.94	0.91							

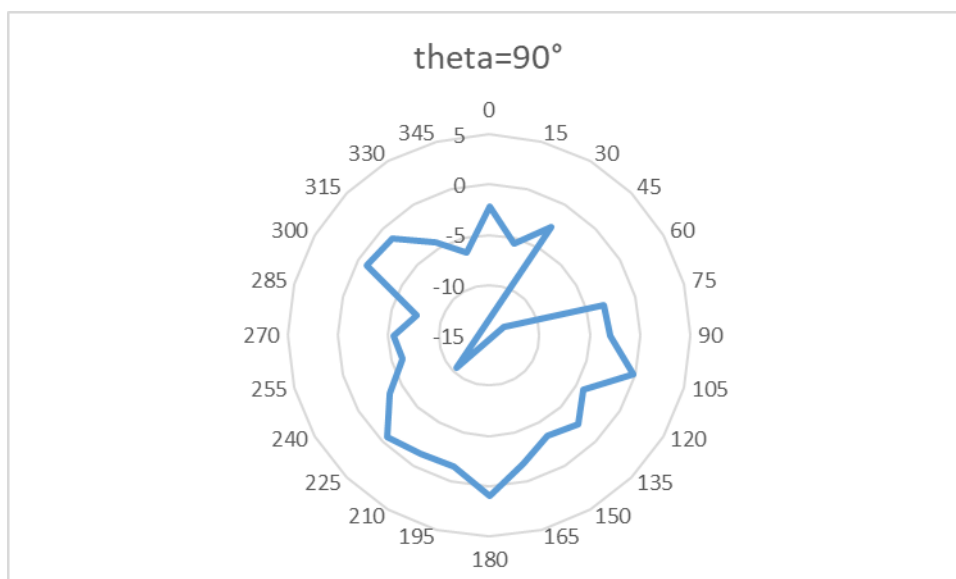
2.45GHz



5200MHz



5750MHz



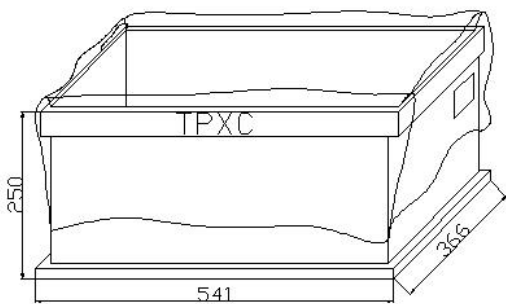
VII. Packing Drawing

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



200PCS/bag

ii. Packing

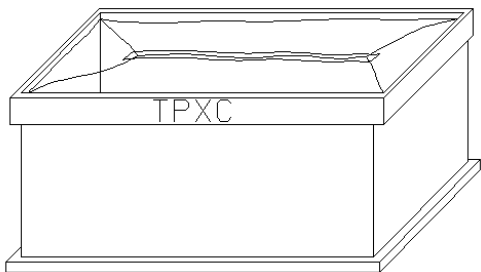


2000PCS/Box

Label

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

iii.Sealing



TP-LINK®

Antenna Specification



Product Number: 3101504786

Product Name: Antenna

TP-LINK®

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

Product Number: 3101504786

Product Name: Antenna

TP-LINK®

Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: _____ / _____

Customer P/N : _____ / _____

TP-LINK P/N: 3101504786

Description:

Antenna|2.4-2.5GHz&5.15-5.85GHz|2.0dBi&1.0dBi|LP|Omni|2W|I-PEX|95
mm|D1.13mm|Deco X80|无|I3045-JI095REV1.0|绿色|否|橙色线/自制件|

TP-LINK Checked By:
Customer Approved By:

TP-LINK®

TP-LINK TECHNOLOGIES CO., LTD.

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Central Zone, Science&Technology Park,
Nanshan, Shenzhen, P.R.China

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

Index

I.	Specification	1
II.	Characteristics and Reliability Test.....	1
III.	Mechanical Drawing and Material Description	3
IV.	RoHS Test Report	4
V.	Antenna – S Parameter Test Data.....	5
VI.	Antenna – Radiation Pattern Test Data	5
VII.	Packing Drawing	7

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	2.0dBi & 1.0dBi
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 (Orange)
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

Product Number: 3101504786

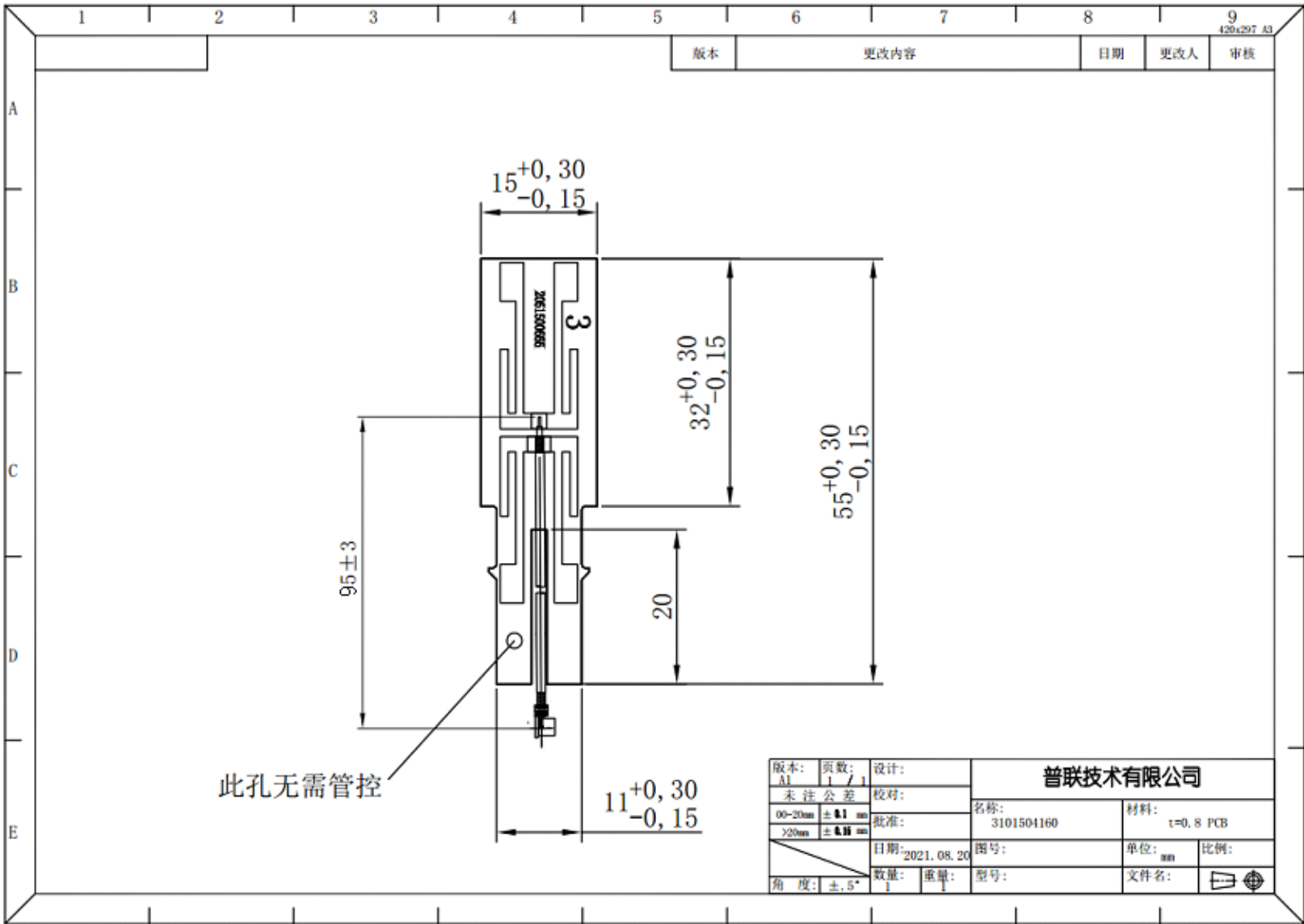
Product Name: Antenna

TP-LINK®

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℃; 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



Product Number: 3101504786

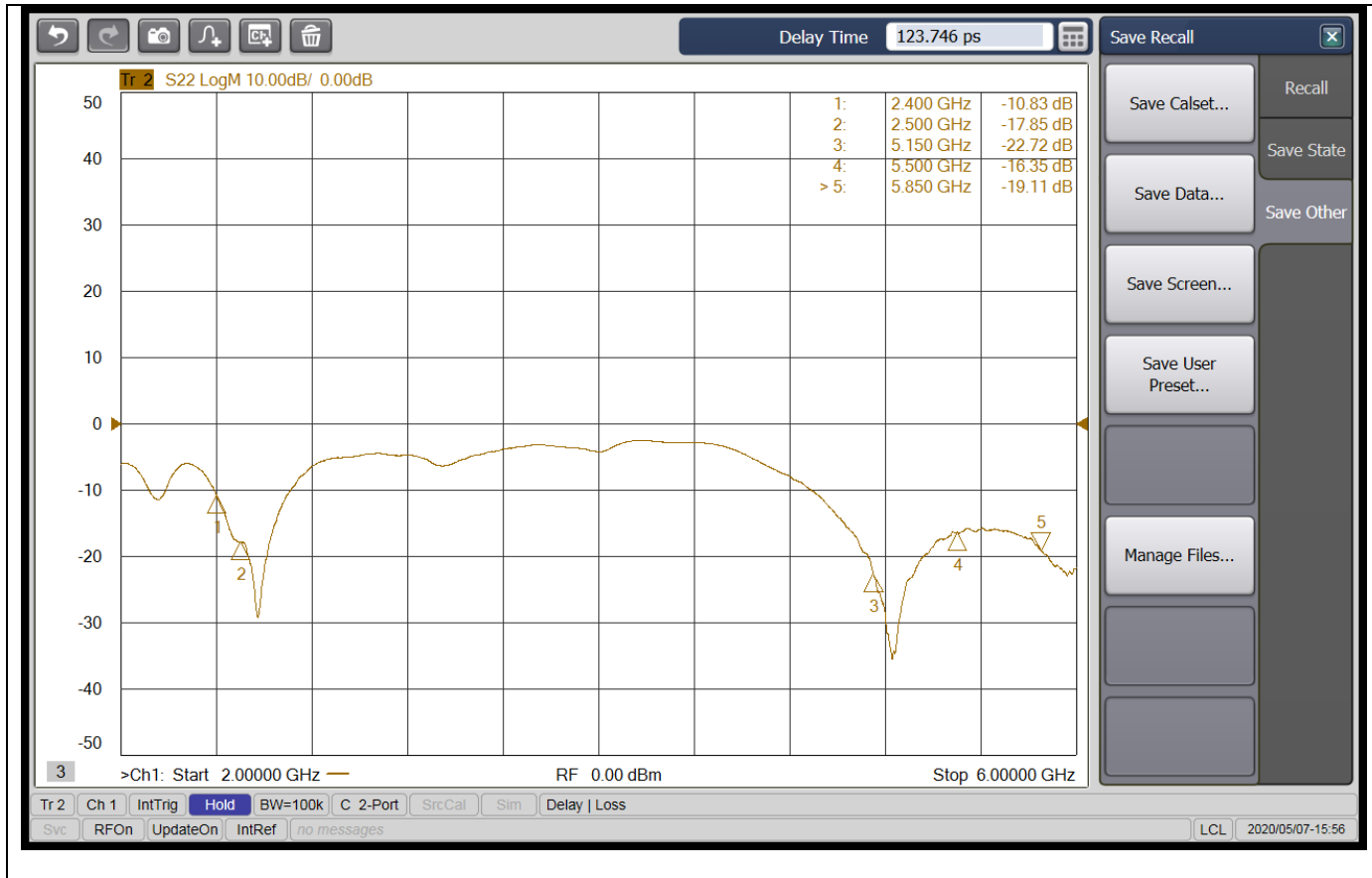
Product Name: Antenna



IV. RoHS Test Report

N O .	Product Model	Constit uents	Material	Test Result for RoHS-corresponding Substance						PFOS	Halogen				Series No.	Date	Title	Test Agent
				Cd	Pb	Hg	Cr(VI)	PBB s	PBD Es	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-400W F	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	RFConn ec 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	3120500335	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 Masterbat ch(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

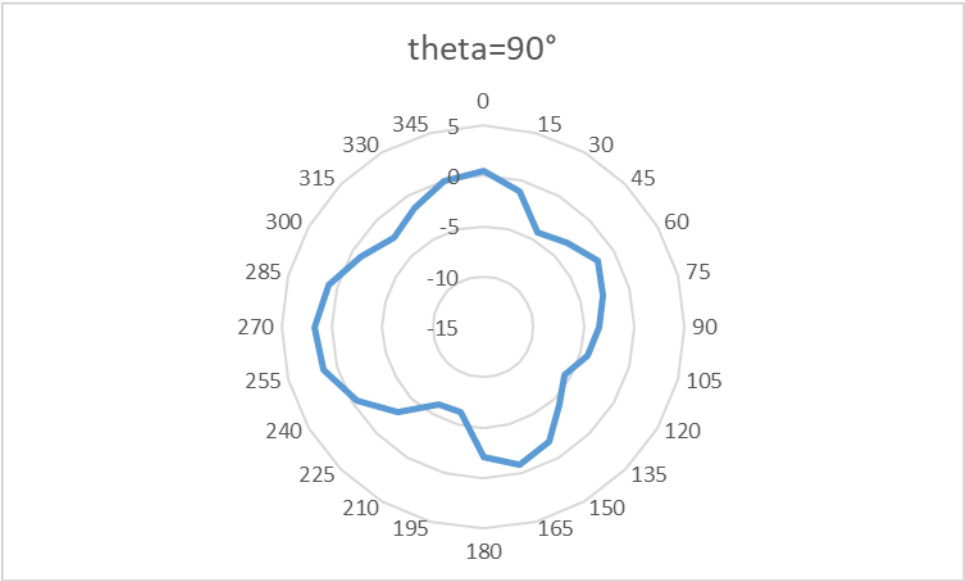


VI. Antenna – Radiation Pattern Test Data

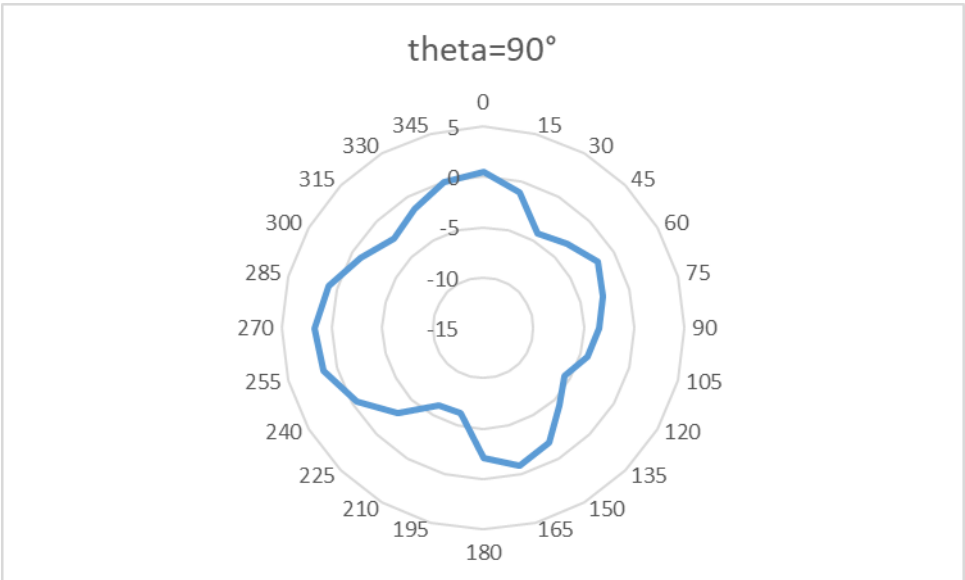
Testing Equipment Specification	
Microwave Chamber	Satimo SG24-S
Testing Equipment	Agilent 5071B

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.58	1.64	1.61	1.71	1.76	1.81	1.88	1.97	1.76	1.81	1.74
Freq. (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650
Peak Gain (dBi)	0.82	0.86	0.84	0.84	0.85	0.91	0.82	0.84	0.93	0.91	0.84
Freq. (MHz)	5700	5750	5800	5850							
Peak Gain (dBi)	0.88	0.74	0.76	0.69							

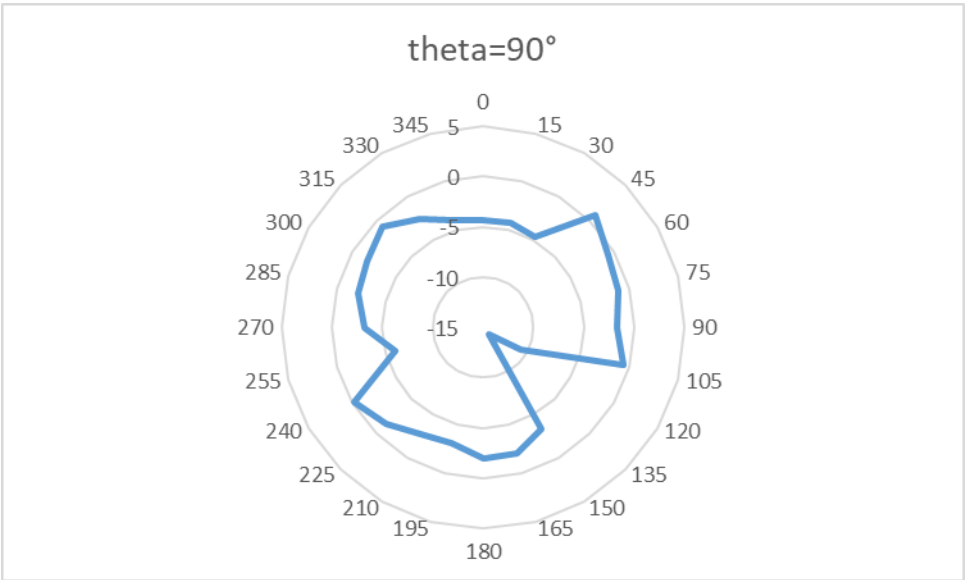
2.45GHz



5200MHz



5750MHz



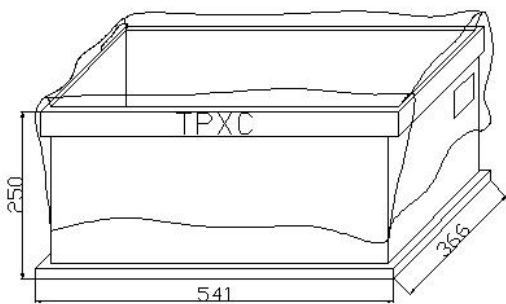
VII. Packing Drawing

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

