APPROVAL SHEET

CUSTOMER NAME	
CUSTOMER P/N	
PART NAME	2.4G black FPC internal antenna L=60MM (Applicable to model :9454W)
P/ N	YJC-6N060-B87
APPROVAL REV.	A3
DELIVERY DATE	January 11, 2022
PREPARED BY	Wu Jiaxiong
CHECKED BY	Fang Wenfeng
APPROVED BY	

Customer Approved		
Prepared By	Checked By	Approved By

Contact Information (factory) :
Company address: building A.C, guangming valley, hongyu guangming valley, no. 11, jiangyou magang, shiwei community, matantian office, guangming district, shenzhen
Hangzhou Office: 212, Building B, Dahua Jianghong International Innovation Park, No. 369, Internet of Things Street, Binjiang District, Hangzhou
Phone + 86-755-27810060/23192199; Fax: + 86-0755-27810057
Company website: http://www.szsyjc.com E-mail: yjc@szsyjc.com

Catalogue

1、 cover。。。。。。。。。。。。。。。。。。。。。。。。。。。。。。。。 1

2、 catalogue。。。。。。。。。。。。。。。。。。。。。。。。。。。。。。 2

3、 resume。。。。。。。。。。。。。。。。。。。。。。。。。。。。。。 3

4、 Antenna plan。。。。。。。。。。。。。。。。。。。。。。。。。。。。 4

5、 Antenna technical parameters and environmental performance test。。。。。。。。。。。。 5

6、 Antenna physical diagram and attached location diagram。。。。。。。。。。 5

7、 Antenna physical diagram and attached location diagram。。。。。。。。。。。。。 6

8、 OTA active test data statistics。。。。。。。。。。。。。。。。。。。。 。。7

9、 2D 3D Test data (2.4G)。。。。。。。。。。。。。。。。。。 。。7-9

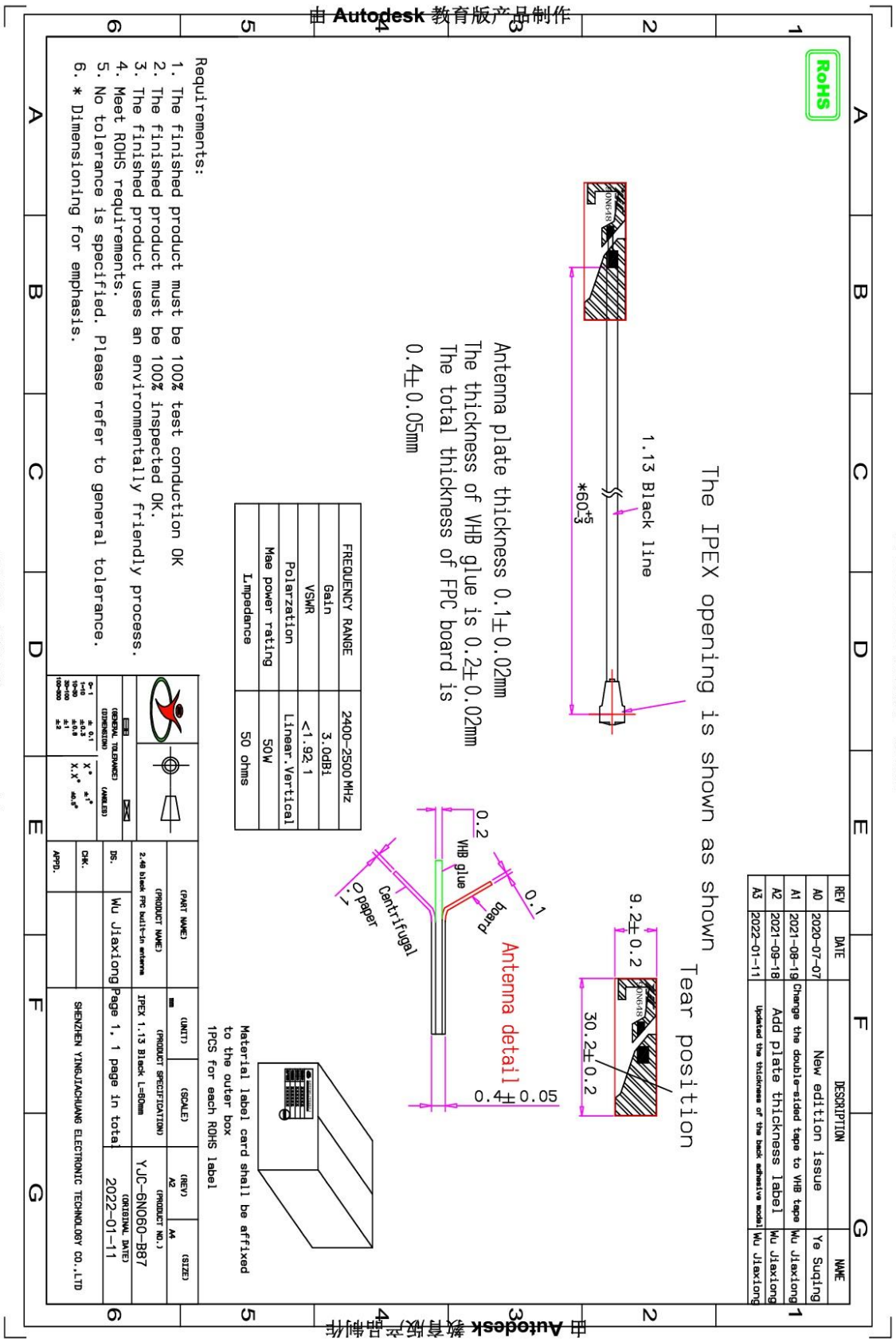
10、 Wire specification parameters。。。。。。。。。。。。。。。。。。。。。。。10

11、 ROHS Material control report。。。。。。。。。。。。。。。。。。。。。。。11

resume：

edition	Content of change and reasons for change	date	release
A/0	Initial release	July 07, 2020	
A/1	Change the double-sided tape to VHB tape	August 19, 2021	
A/2	Add plate thickness label	September 18, 2021	
A/3	Updated the thickness of the back adhesive model	January 11, 2022	

Antenna plan：



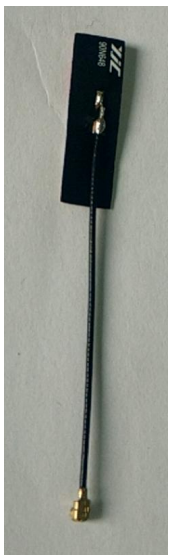
Antenna technical parameters and environmental testing：

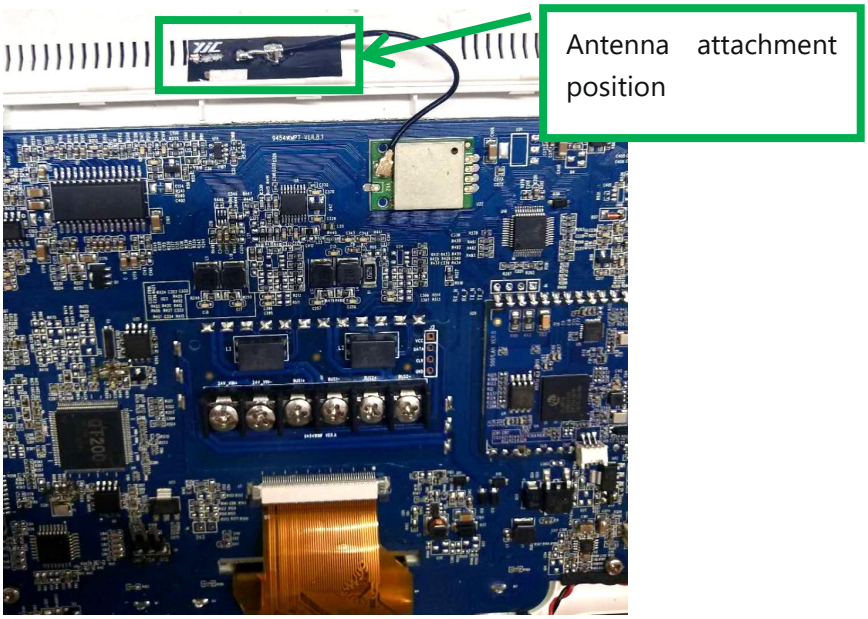
Electrical technical parameter			
Electrical Specifications		Mechanical Specifications	
Frequency Range	2400-2500MHz	Wire Color	Black
VSWR	＜1.92	Input connector	IPEX
Input Impedance	50 Ω	Wire Length	60MM
Direction	All	Working Temperature	-20℃~+70℃
Gain	2.53dBi	Working Humidity	20%~80%

Environmental performance test:

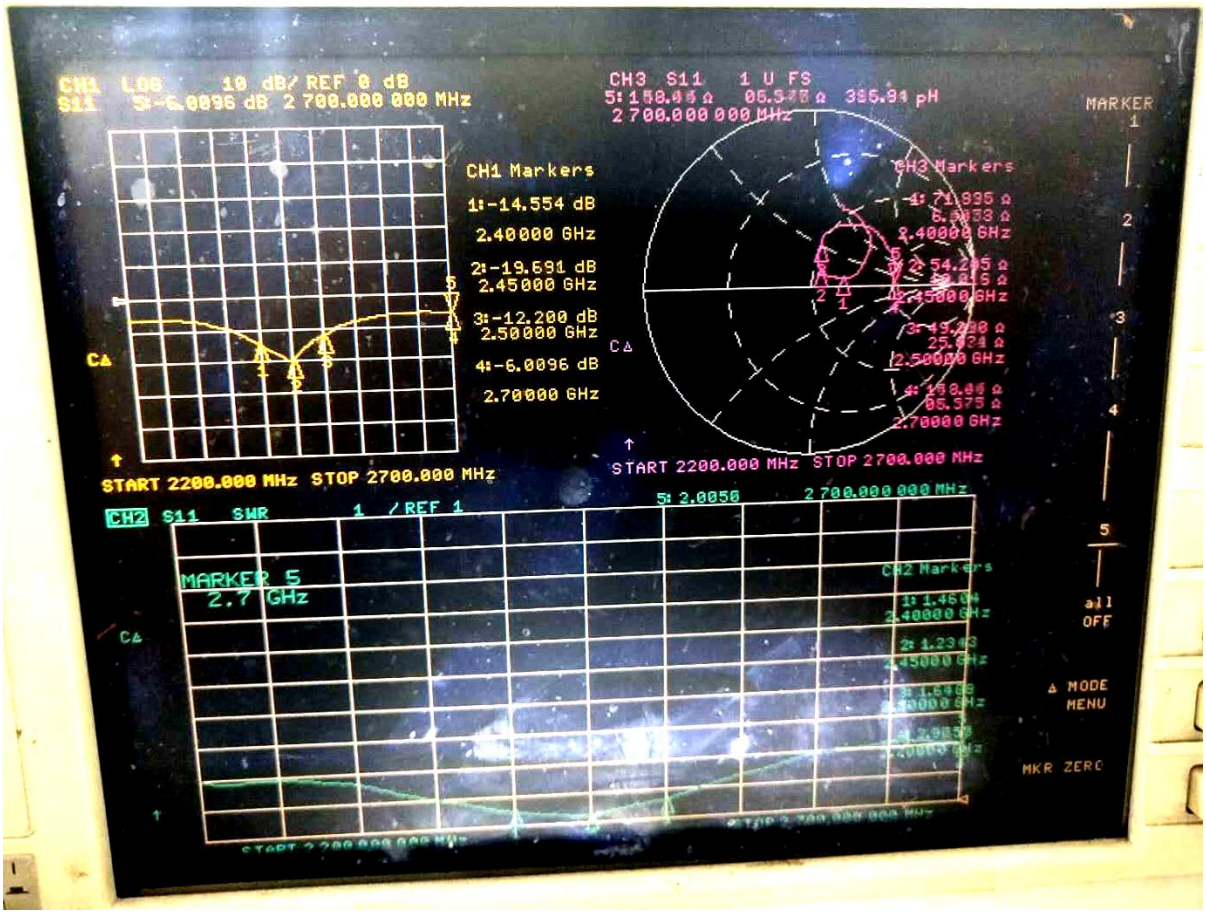
Project	Test condition	Standard
Storage Conditions	In the absence of specified test temperature, humidity, air pressure is as follows:: 1. Temperature is - 30 ℃ ~ + 80 ℃ 2. Relative humidity of 45% to 45% 3. Air pressure is 86 kpa to 106 kpa	Electrical and mechanical performace is normal
High and low temperature test	Between 70 ℃ and -20 ℃ for 5 loops, then 1-2 h under normal conditions, check the appearance quality.	Size should meet the requirements and meet the performance of mechinery and electric.
Constant damp and hot resistance test	95 + / - 3% relative humidity, temperature test: 40 ℃. Lasts 2 h after, try to take out the determination of electrical properties, within 5 min after try 1-2 h under article normal thing, check the appearance quality	Size should meet the requirements and meet the performance of mechinery and electric.
vibration test	10-55 hz, vibration frequency range of displacement amplitude: 0.35 MM, acceleration amplitude: 50.0 M/S, sweep cycles: 30 times	Electrical and mechanical performace is normal
Fall down test	1 m high altitude in accordance with the perpendicular axis free drop 3 times	Electrical and mechanical performace is normal

Antenna physical diagram and attached location diagram：





Antenna performance test diagram：



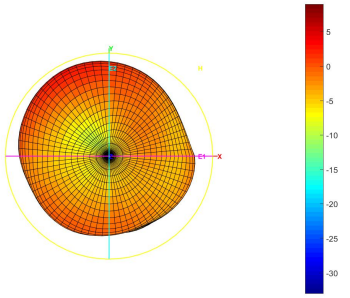
OTA active test data statistics:

Prototype type	Protocol mode	TRP	TIS	channel	OTA coupling test	
		speed	speed		TRP(dbm)	TIS(dbm)
9454W	802.11b	11M	11M	6	15.45	-77.27
	802.11g	6M	54M	6	15.83	-71.64
	802.11n	MCS0	MCS7	6	15.63	-70.69

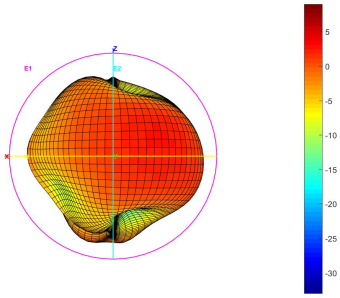
2D, 3D(2.4G) test data:

Frequency	Efficiency (%)	Gain.(dBi)
2400MHz	60.53	2.25
2410MHz	61.94	2.35
2420MHz	62.52	2.4
2430MHz	61.66	2.41
2440MHz	63.24	2.53
2450MHz	61.94	2.46
2460MHz	59.84	2.25
2470MHz	62.23	2.49
2480MHz	64.27	2.54
2490MHz	62.52	2.45
2500MHz	62.66	2.52

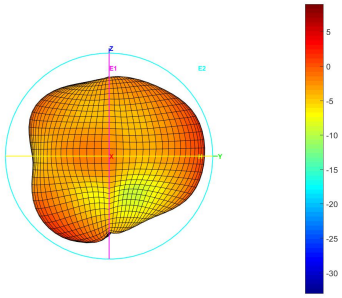
Total_3D_H_2.4GHz



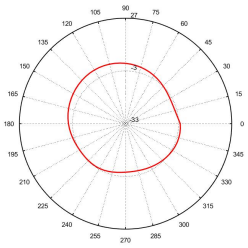
Total_3D_E1_2.4GHz



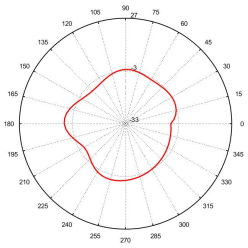
Total_3D_E2_2.4GHz



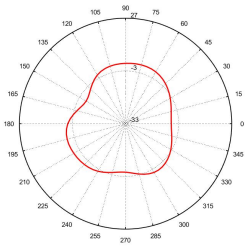
Total_Polar_H_2.4GHz



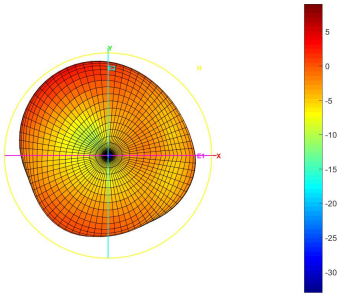
Total_Polar_E1_2.4GHz



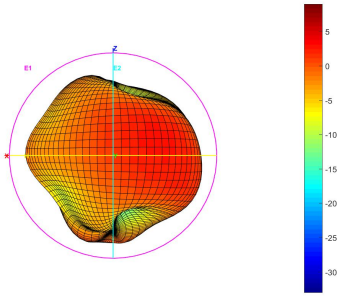
Total_Polar_E2_2.4GHz



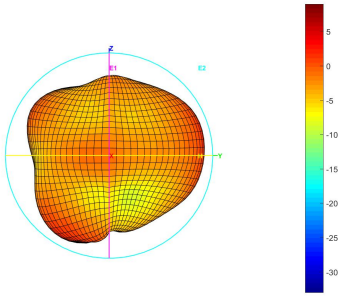
Total_3D_H_2.45GHz



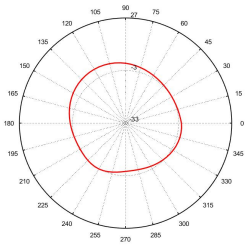
Total_3D_E1_2.45GHz



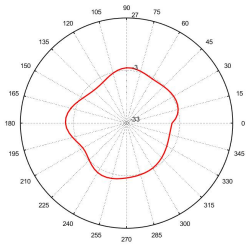
Total_3D_E2_2.45GHz



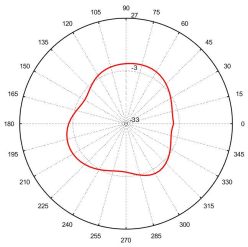
Total_Polar_H_2.45GHz



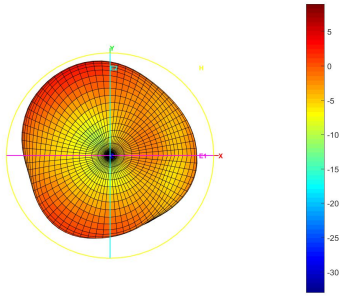
Total_Polar_E1_2.45GHz



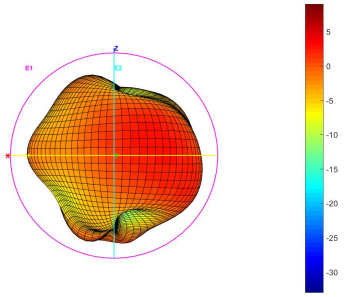
Total_Polar_E2_2.45GHz



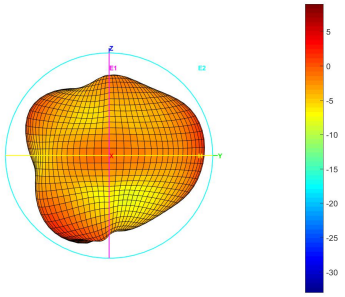
Total_3D_H_2.5GHz



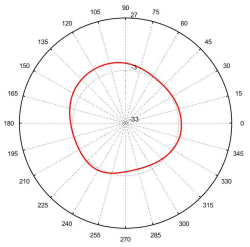
Total_3D_E1_2.5GHz



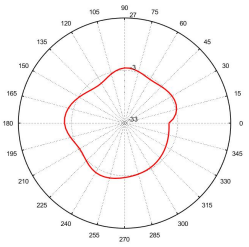
Total_3D_E2_2.5GHz



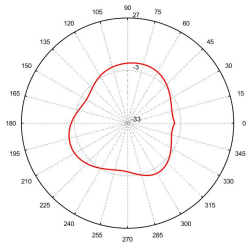
Total_Polar_H_2.5GHz



Total_Polar_E1_2.5GHz



Total_Polar_E2_2.5GHz



Product Type	1.13 Wire
Structure Drawing	

Structure Characteristics

Structure	Item	Standard Value
Inner Conductor	Material	Silver plated copper wire
	(mm/Composition(No./mm)	7/0.08±0.005
	Nom.Dia(mm)	Φ0.24±0.01
Insulation	Material	FEP
	Nom.Dia(mm)	Φ0.7±0.03
Outer Conductor	Material	Tinned copper
	From	Weaving
	Shielding rate	≥90%
	Nom.Dia(mm)	Φ0.92±0.03
Jacket	Material	FEP
	Nom.Dia(mm)	Φ1.13±0.05

电气性能 Electrical Characteristics

Item	Standard Value	Item	Frequency	Standard Value
Impedance (Ω)	50±3	Attenuation@20 ℃ (dB/100m)	1GHz	≤2.23
Capacitance(pF/m)	98		2GHz	≤3.15
Tensile strengthkgf/mm²	1.76		3GHz	≤3.96
VSWR	≤1.40@0-6GHz		4GHz	≤4.6
Dielectric Strength (A.C V/1min)	1000		5GHz	≤5.15
(MHz) Max.oper. frequency	6000		6GHz	≤5.7

Dependability

Min.Bending Radius/Single	mm	4
Min.Bending Radius/Repeated	mm	8
Operating Temperature	℃	-20~+80

Packing

Packing Mode	1000 (m/disc)Reel

Trips for Use

Storage Environment	Temperature: below 30℃, humidity: 20-65%
Teflon Shrink	Insulation shrinkage ≦0.2mm; Sheath shrinkage ≦0.3mm
Processing temperature	Under the condition of 250℃~260℃, it can withstand for a short time; Thermal decomposition occurs above 300℃
The best save cycle	After 2 months, the effect of tin becomes worse after 2 months, but the soon as possible after peeling in the high temperature and high humidity environment in summer

Material RoHS conformity declaration form

This is to certify that the delivery to your company's components, raw materials, auxiliary materials used and the additives in the production engineering are accord with RoHS environmental requirements of the restrictions on the use of hazardous substances directive (RoHS directive 2011/65 / EU)

About components used raw materials, packaging materials, auxiliary materials and additives used in the production process such as composition of the report is as follows:

Component /Part Name	Material Composition	ICP report #	Test Org.	Test Date	Content of harmful substances (ppm)						PASS?
					Cd	Pb	Hg	Cr^{6+}	PBB	PBDE	PASS
Wire rod	Coaxial cable	CANEC2301851703	SGS	23/02/23	ND	ND	ND	ND	ND	ND	PASS
terminal	Phosphor bronze	CANEC2301145810	SGS	23/02/08	ND	5	ND	ND	ND	ND	PASS
	Gold coating	A2220404860101001C	CTI	22/09/17	ND	ND	ND	ND	ND	ND	PASS
	Rubber core	A2230035037101002E	SGS	23/02/06	ND	ND	ND	ND	ND	ND	PASS
FPC	FPCFlexible board	FTS2302160201-01C1	SGS	23/02/20	ND	ND	ND	ND	ND	ND	PASS
Eco-friendly tin wire	Eco-friendly tin wire	ZXEC2203054802	SGS	22/09/19	ND	46	ND	ND	ND	ND	PASS