



APPROVAL SHEET

CUSTOMER NAME		
CUSTOMER P/N		
PART NAME	2.4G/5.8G black FPC built-in antenna, 1.13 black L=60MM (Applicable models: N919N-A)	
P/ N	YJC-6N060-B74	
APPROVAL REV.	A0	
DELIVERY DATE	2022-09-19	
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Customer Approved		
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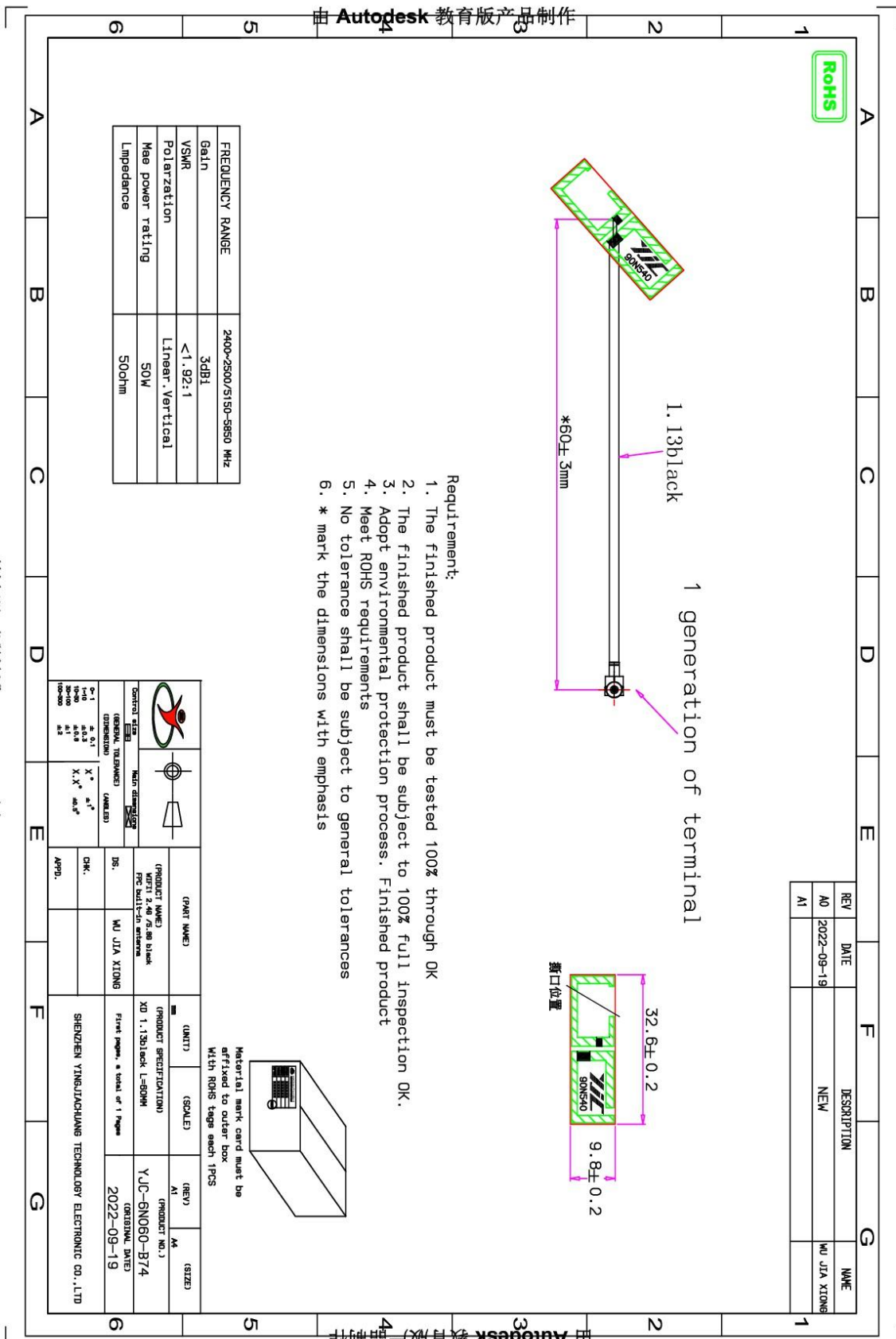


Resumer:

Version	Change contents and reasons	Date	Issue
A0	NEW	September 19, 2022	



The antenna's floor plan:





Antenna technical parameters and environmental testing:

Electrical parameters of electrical apparatus			
Electrical Specifications		Mechanical Specifications	
Frequency Range	2400-2500/5150-5850 MHz	Cable Color	black
VSWR	<1.92	Input connector	XD
Input Impedance	50 Ω	Cable length	60 mm
Direction	All	Working Temperature	-20℃~+70℃
Gain	3.0 dBi	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 - 20 °C ~ + 70 °C 2. Relative humidity of 45% to 45% 3. Air pressure is 86 kpa to 106 kpa	Electrical and mechanical properties is normal
high and low temperature test	Between 70 °C and -20 °C for 5 loops, then 1-2 h under normal conditions, check the appearance quality.	Size should meet the requirements and should satisfy the content with the electrical and mechanical properties
Constant damp and hot resistance test	95 + / - 3% relative humidity, temperature test: 40 °C. 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 should satisfy the content with the electrical and mechanical properties
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 properties is normal
fall down test	1 m high altitude in accordance with the perpendicular axis free drop 3 times	Electrical and mechanical properties is normal



Antenna drawing:



Antenna performance test chart:

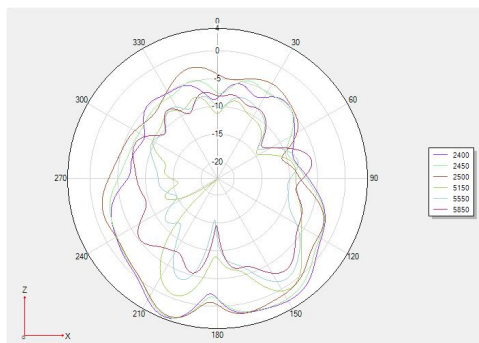


2D,3D Antenna pattern testing:

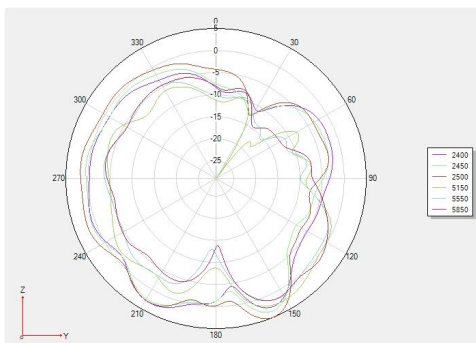
Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	69.66	3.83
2410MHz	69.82	4.26
2420MHz	69.82	3.93
2430MHz	69.66	4.37
2440MHz	69.34	3.47
2450MHz	69.34	3.95
2460MHz	68.71	3.75
2470MHz	67.14	4.35
2480MHz	66.68	4.62
2490MHz	65.31	4.94
2500MHz	64.42	4.99
5150MHz	53.81	2.65
5250MHz	50.23	2.09
5350MHz	51.46	2.45
5450MHz	45.29	2.29
5550MHz	43.75	1.83
5650MHz	44.64	1.82
5750MHz	42.09	1.73
5850MHz	48.46	2.58



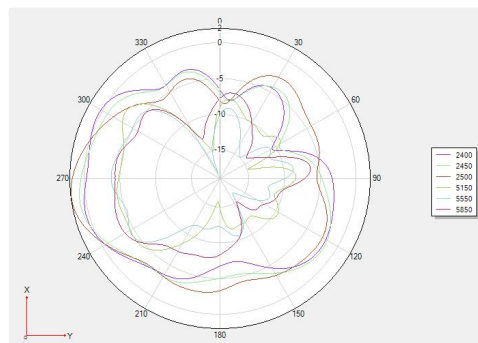
Phi 0 2D 图:



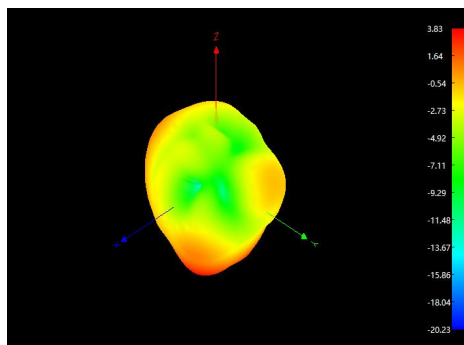
Phi 90 2D 图



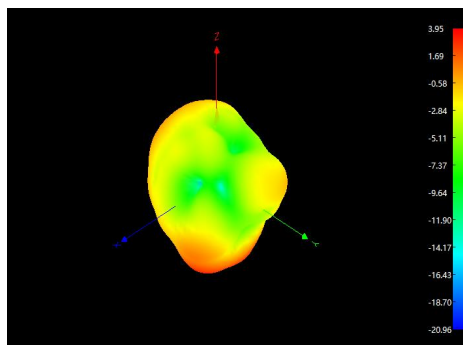
Theta 90 2D 图



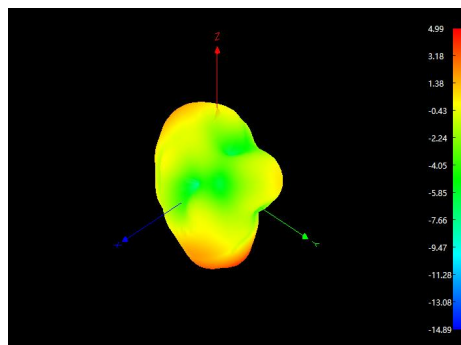
3D 2400:



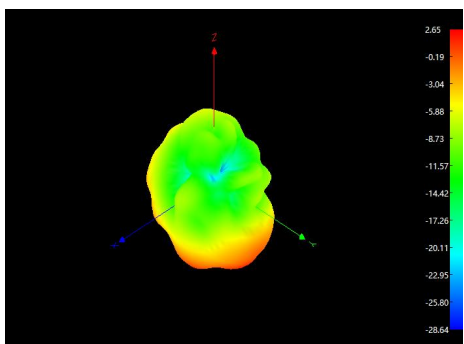
3D 2450:



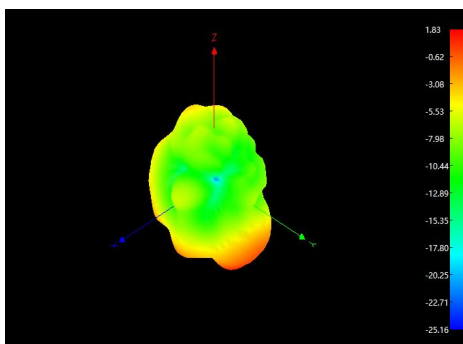
3D 2500:



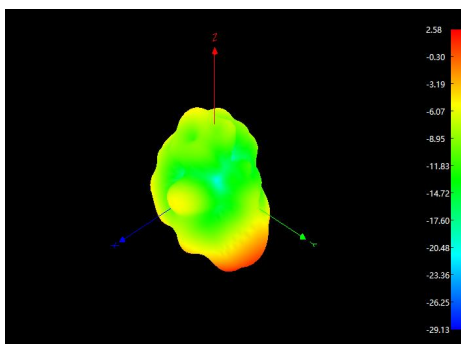
3D 5150:



3D 5550:



3D 5850:





Specification parameters of wire

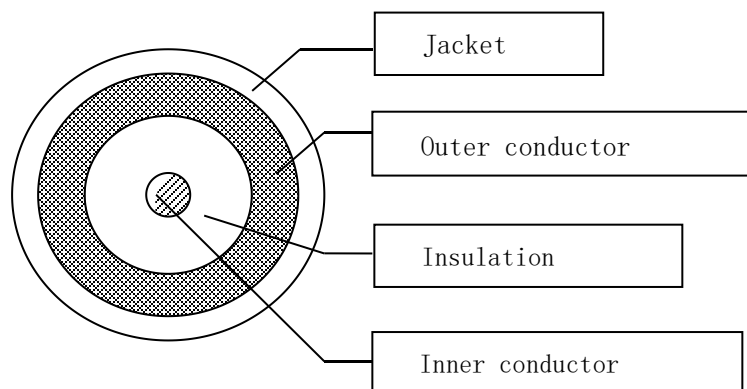
1. product description

1.1 This product is soft Teflon insulation series coaxial cable. Is suitable for the microwave equipment, wireless communication systems and equipment.

Product features : Excellent flexi-ability, good V.S.W.R, good shielding performance.

2. Cable with data and structure diagram:

2.1 :1 structure diagram



2.2 Specification of cable:

Item		NO	Materials and size
Inner conductor	Material	/	Silver plated copper wire
	Composition	mm	7/0.08±0.005
	OD	mm	0.24±0.01
Insulation	Material	/	Teflon FEP(200 degrees of fluorinated ethylene propylene resin)
	OD	mm	0.7±0.03
	Color	/	Transparent color
Outer conductor	Material	/	Tinned copper wire
	Form	/	Weave
	Density	%	93%(29 (Mesh) 48 (Coding 4*16/0.05)
	OD	mm	0.92±0.03
Jacket	Materia	/	Teflon FEP(200 degrees of fluorinated ethylene propylene resin)
	OD	mm	Φ 1.13±0.05
	color of sheath	/	Gray or black (Can be processed according to customer's requirements)



3.The cable properties

3.1 Electrical properties

test project	Standard value		Note
Rated temperature /voltage	-55℃～+200℃ / 30V		/
Insulation resistance	3000MΩ.Km		Resistance tester
Conductor resistance	1369 Ω /Km 20℃		/
Pressure	2KV		Withstand voltage tester
Insulation	Unaged	Tensile Strength	2500 PSI MIN. (1.76Kg/mm ²)
		Elongation	200% MIN
	Aged	Tensile Strength	2500 PSI*75%(168HRS*232℃)
		Elongation	200% MIN*75%(168HRS*232℃)
Jacket	Unaged	Tensile Strength	2500 PSI MIN. (1.76Kg/mm ²)
		Elongation	200% MIN
	Aged	Tensile Strength	2500 PSI*75%(168HRS*232℃)
		Elongation	200% MIN*75%(168HRS*232℃)
characteristic impedance	50±2Ω		TRK Analysis of network analyzer The TRK tester
Capacitance	96. 65PF/M		Digital capacitance meter
Velocity	70%		Analysis of network analyzer
Propagation Delay	4. 8ns/m		/
Shielding attenuation	100dB		/
Bending radius	<5mm		/
(UL) Flame retardant	passed		VW-1 provides material report
Attenuation(dB/m)	test frequency	Attenuation	Sea level to 20 DEG C test
	0.1GHz	0.42	
	0.4GHz	0.58	
	1GHz	2.20	
	2GHz	3.40	
	3GHz	4.20	
	4GHz	4.50	
	5GHz	5.20	
	6GHz	5.60	
VSWR	0.3—3GHz	≤1.30	
	3—6GHz	≤1.35	

**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	RG/RF Series Coaxial Cables	SZXEC2202766604	SGS	22/08/18	ND	ND	ND	ND	ND	ND	PASS
FPC	FPC	SHAEC2202460504	SGS	22/02/21	ND	ND	ND	ND	ND	ND	PASS
Environmental Tin Silk	Environmental Tin Silk	SZXEC2103042902	SGS	21/09/30	ND	34	ND	ND	ND	ND	PASS
End terminal	copper	CANEC2201952008	SGS	22/02/18	ND	5	ND	ND	ND	ND	PASS
	Gold	A2210394436101001	CTI	21/09/27	ND	ND	ND	ND	ND	ND	PASS
	Rubber core	A2220046361101002ER1	SGS	22/02/22	ND	ND	ND	ND	ND	ND	PASS