




APPROVAL SHEET

CUSTOMER NAME		
CUSTOMER P/N		
PART NAME	2.4G 3dBi Green PCB internal antenna L=90mm	
P/ N	YJC-6N090-B39	
APPROVAL REV.	A1	
DELIVERY DATE	November 11, 2020	
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Customer Approved		
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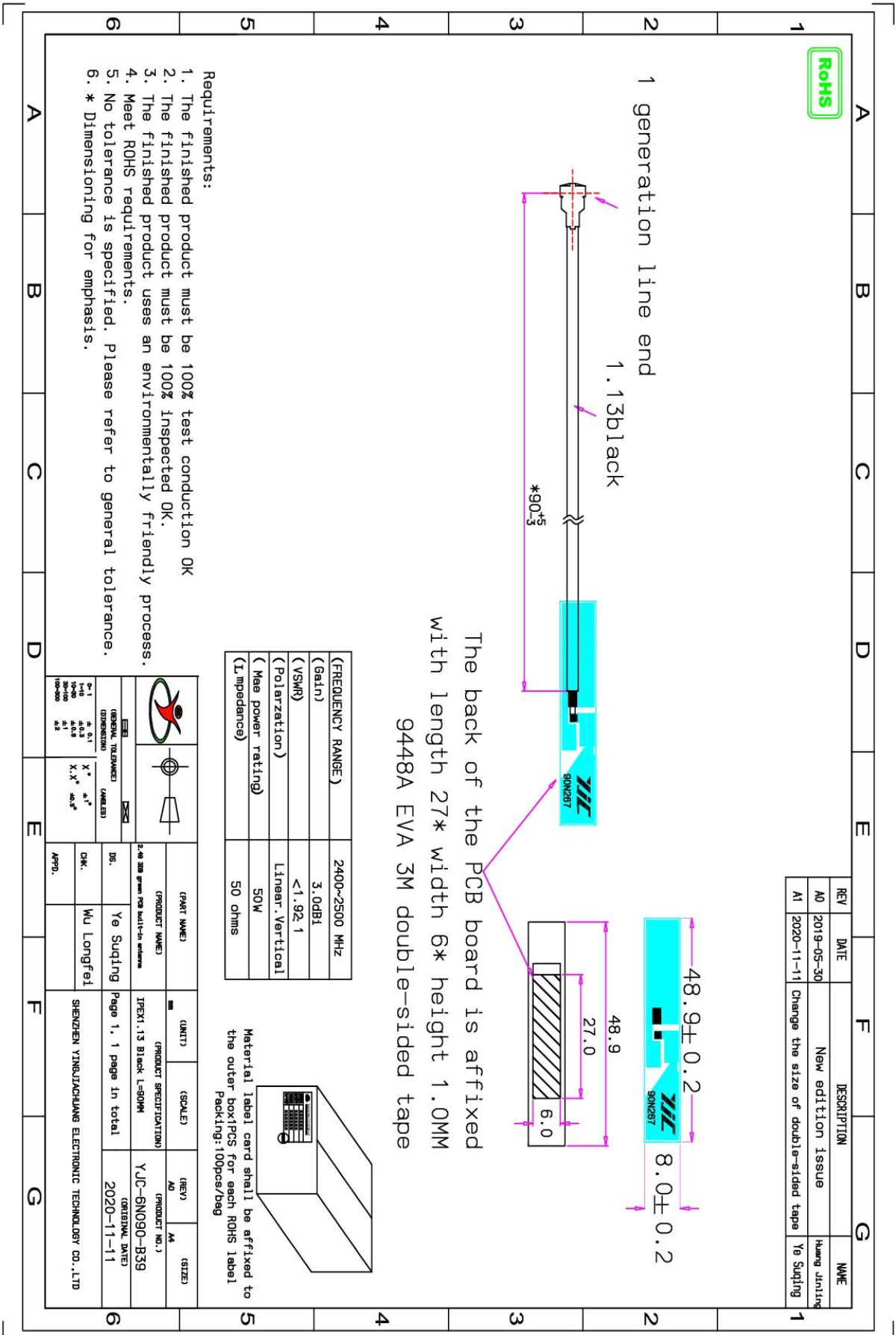


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Product structure diagram:





Antenna technical parameters and environmental performance testing

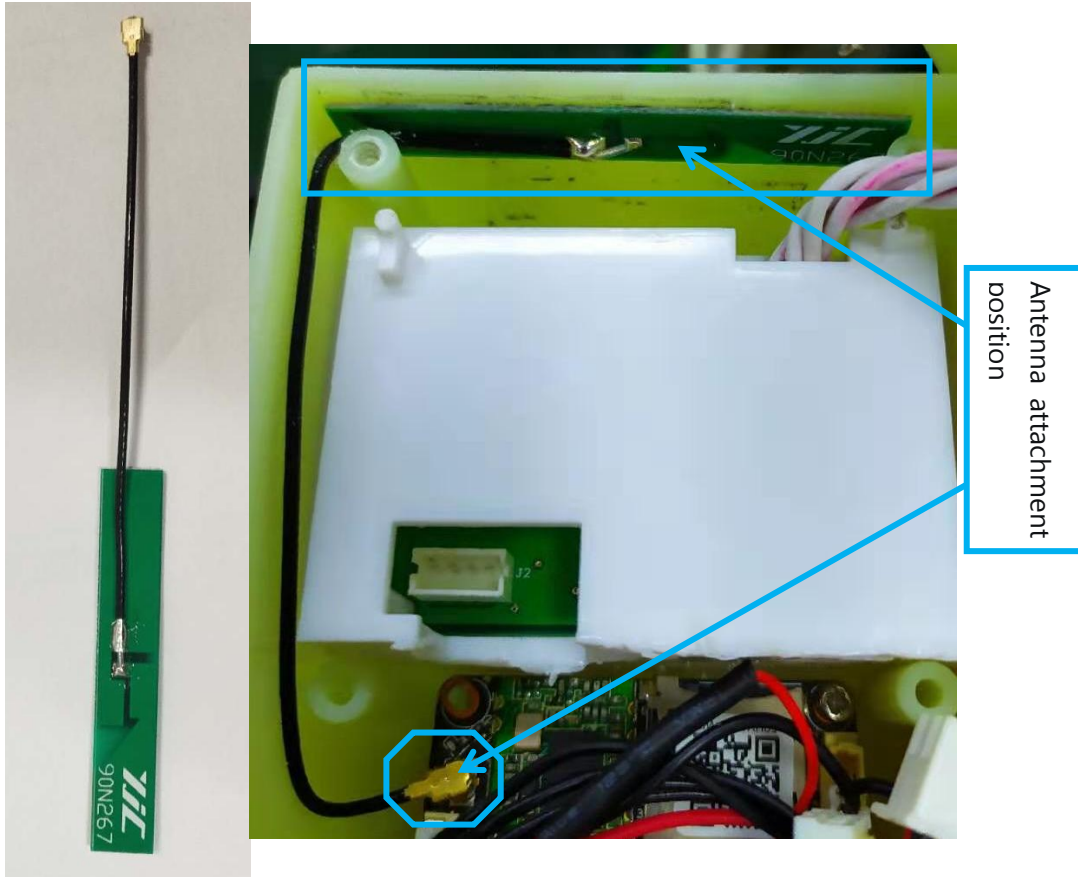
Electrical technical parameter			
Electrical Specifications		Mechanical Specifications	
Frequency Range	2400-2500MHz	Cable Color	BLACK
VSWR	<1.92 (test In the casing)	Input connector	IPEX
Input Impedance	50 Ω	Cable length	90 mm
Direction	All	Working Temperature	-20°C~+70°C
Gain	3.0 dBi	Working Humidity	20~80%

Environmental performance test

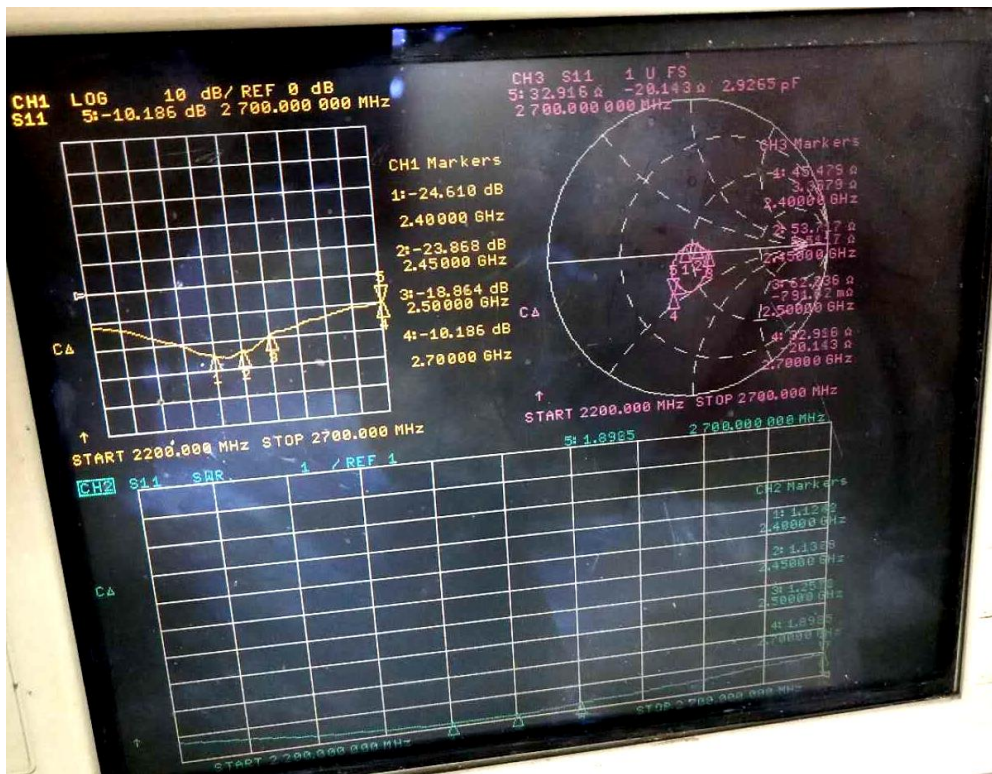
Project	Test condition	Standard
Storage Conditions	In the absence of specified test temperature, humidity, air pressure is as follows:: 1. Temperature is - 30 °C ~ + 80 °C 2. Relative humidity of 45% to 45% 3. Air pressure is 86 kpa to 106 kpa	Electrical and mechanical performace is normal
High and low temperature test	Between 70 °C and -20 °C for 5 loops, then 1-2 h under normal conditions, check the appearance quality.	Size should meet the requirements and meet the performance of mechnery and electric.
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 meet the performance of mechnery 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 and location map:



Antenna internal electrical test diagram





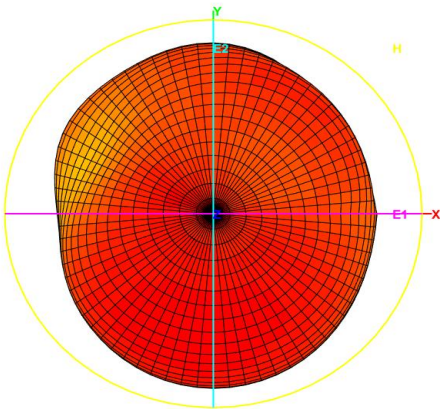
2.4G test data

Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	76.56	3.00
2410MHz	78.34	3.27
2420MHz	78.16	3.30
2430MHz	77.98	3.31
2440MHz	78.16	3.44
2450MHz	77.62	3.37
2460MHz	76.38	3.31
2470MHz	77.27	3.29
2480MHz	74.64	3.14
2490MHz	75.34	3.10
2500MHz	73.28	3.06

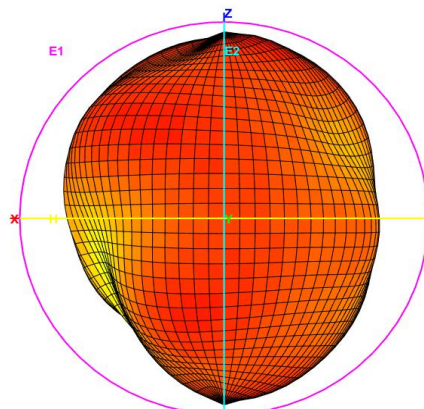
Total_3D_H_2.4GHz

Total_3D_E1_2.4GHz

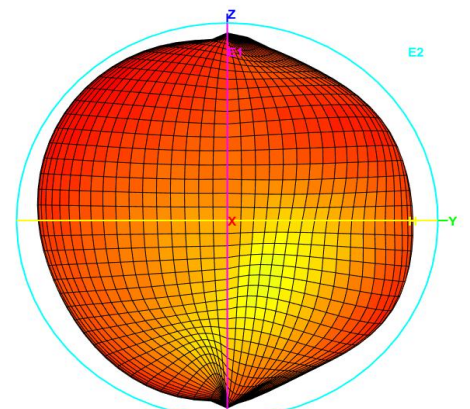
Total_3D_E2_2.4GHz



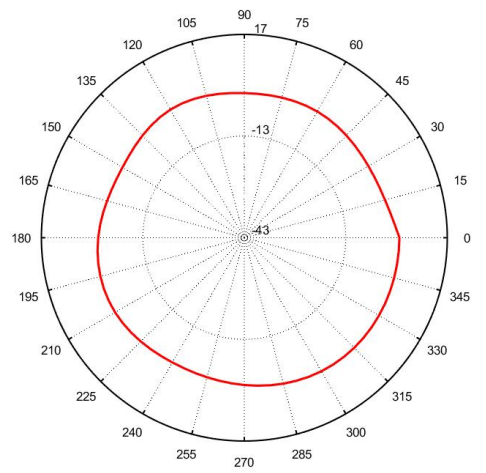
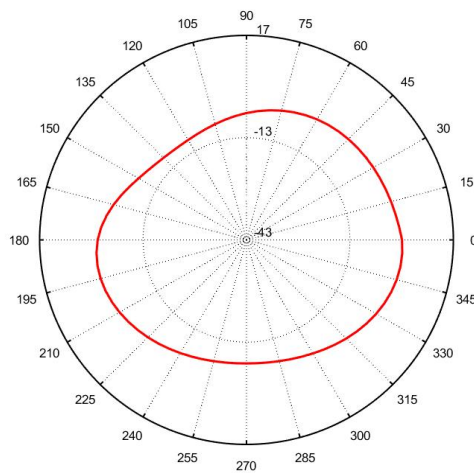
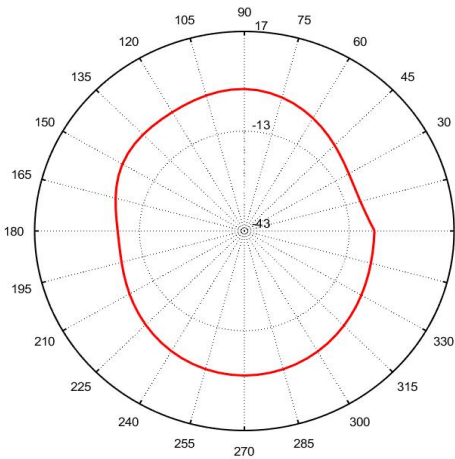
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Total_Polar_E1_2.4GHz

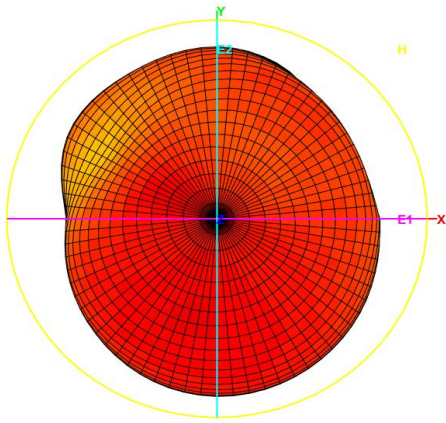


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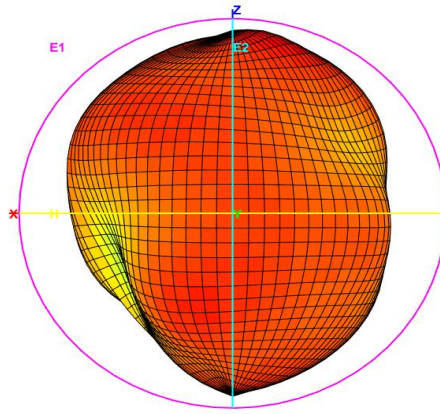




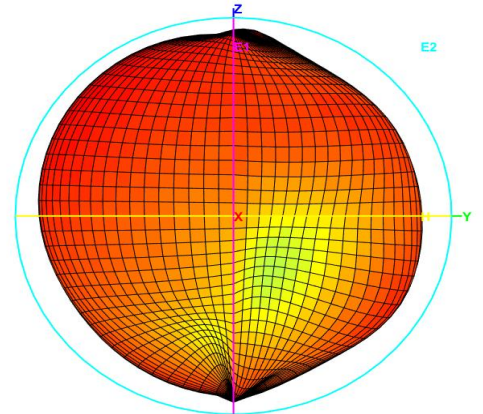
Total_3D_H_2.45GHz



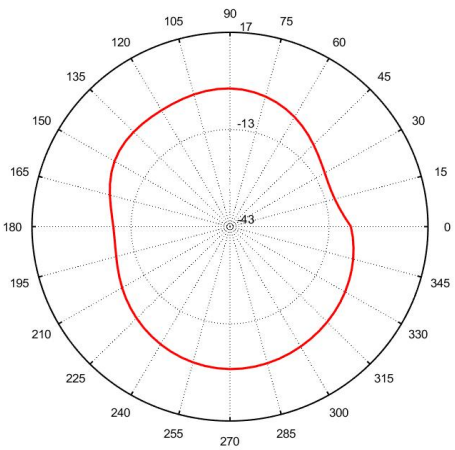
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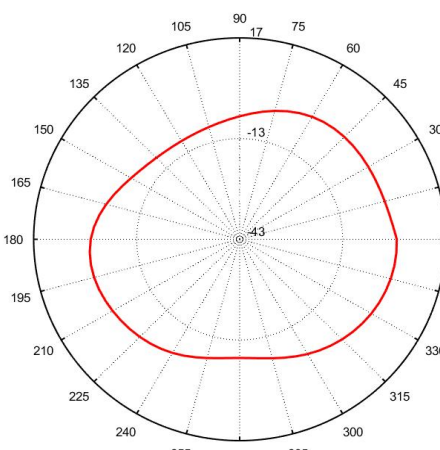
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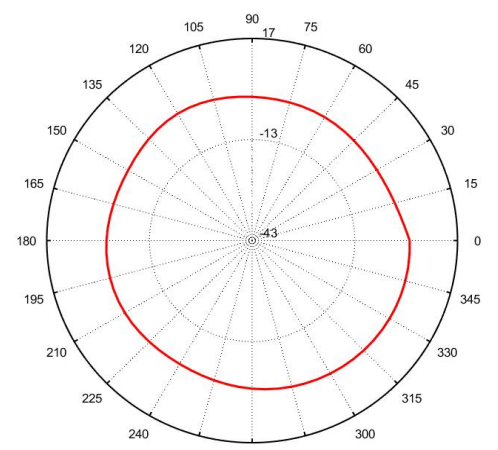
Total_Polar_H_2.45GHz



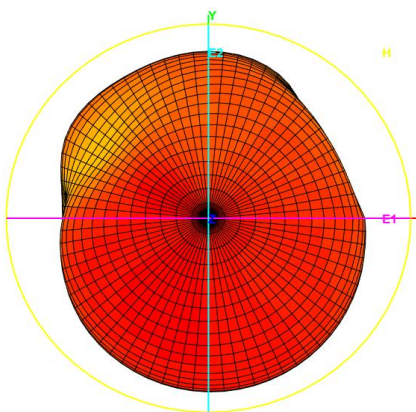
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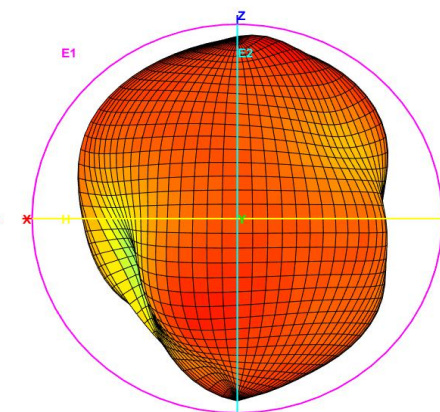
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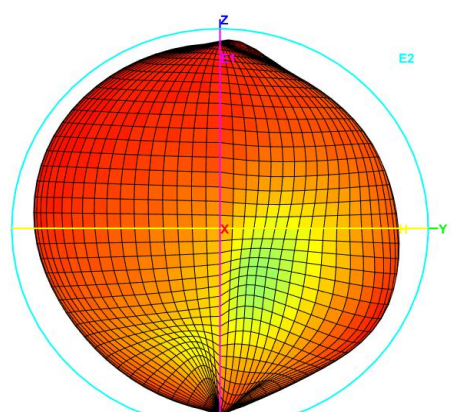
Total_3D_H_2.5GHz



Total_3D_E1_2.5GHz



Total_3D_E2_2.5GHz

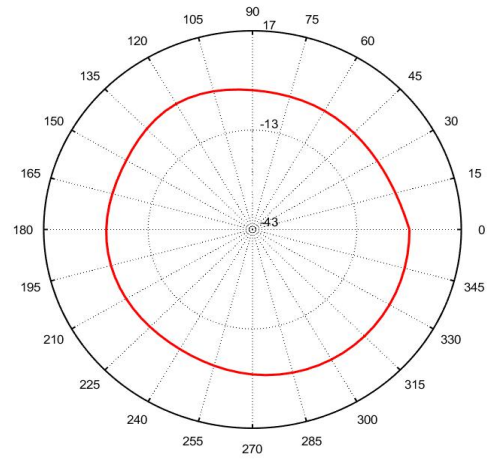
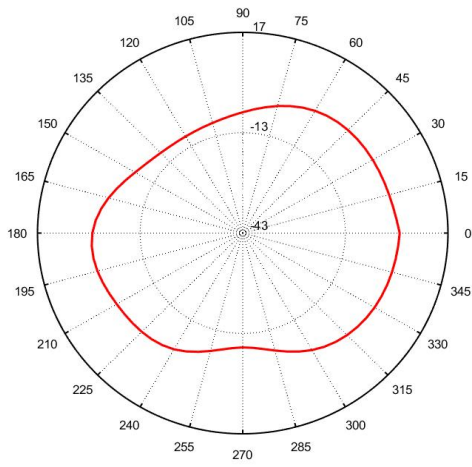
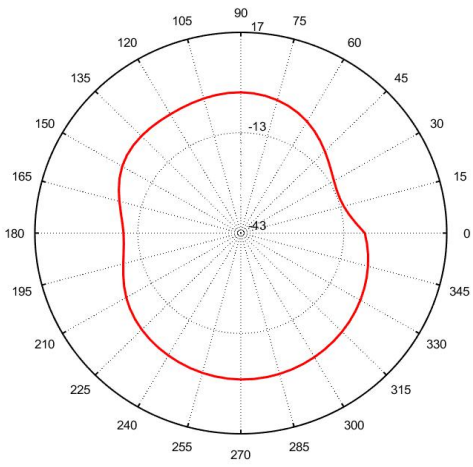





Total_Polar_H_2.5GHz

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 °C (dB/100m)	1GHz	≤2.23
Capacitance(pF/m)	98		2GHz	≤3.15
Tensile strengthkgf/mm ²	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		°C	-20~+80	
Packing				
Packing Mode	1000 (m/disc)Reel			
Trips for Use				
Storage Environment	Temperature: below 30°C, humidity: 20-65%			
Teflon Shrink	Insulation shrinkage ≅0.2mm; Sheath shrinkage ≅0.3mm			
Processing temperature	Under the condition of 250°C~260°C, it can withstand for a short time; Thermal decomposition occurs above 300°C			
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	
Wire rod	RG/RF series coaxial cable	XMNEC2000163404	SGS	20/03/11	ND	10	ND	ND	ND	ND	PASS
Double-sided tape	EVA foam	SHAEC1901358201	SGS	19/01/23	ND	17	ND	ND	ND	ND	PASS
	3M adhesive	SHAEC2001051801	SGS	20/01/20	ND	ND	ND	ND	ND	ND	PASS
PCB	PCB	SHAEC1927288104	SGS	19/12/13	ND	10	ND	ND	ND	ND	PASS
Tin bar	Eco-friendly tin wire	SZXEC2002413008	SGS	20/10/13	ND	42	ND	ND	ND	ND	PASS
IPEX	copper	CANEC2002981804	SGS	20/03/21	ND	11	ND	ND	ND	ND	PASS
	Gold coating	A2190318585101001E	CTI	19/11/25	ND	ND	ND	ND	ND	ND	PASS
	Rubber core	A2200061493101001E	CTI	20/03/27	ND	ND	ND	ND	ND	ND	PASS