



Shenzhen Yingjia Chuang electronic technology Co., LTD

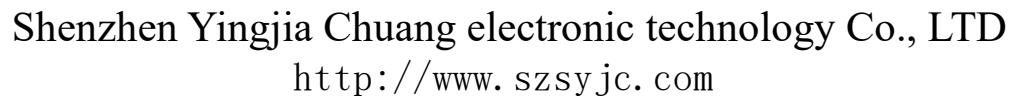
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APPROVAL SHEET

CUSTOMER NAME	Rulian technology	
CUSTOMER P/N	54.07.001.0006	
PART NAME	2.4G/5.8G white custom waterproof antenna	
P/ N	YJC-60302-W37	
APPROVAL REV.	A0	
DELIVERY DATE	August 12th, 2023	
PREPARED BY	Yin Feijie	
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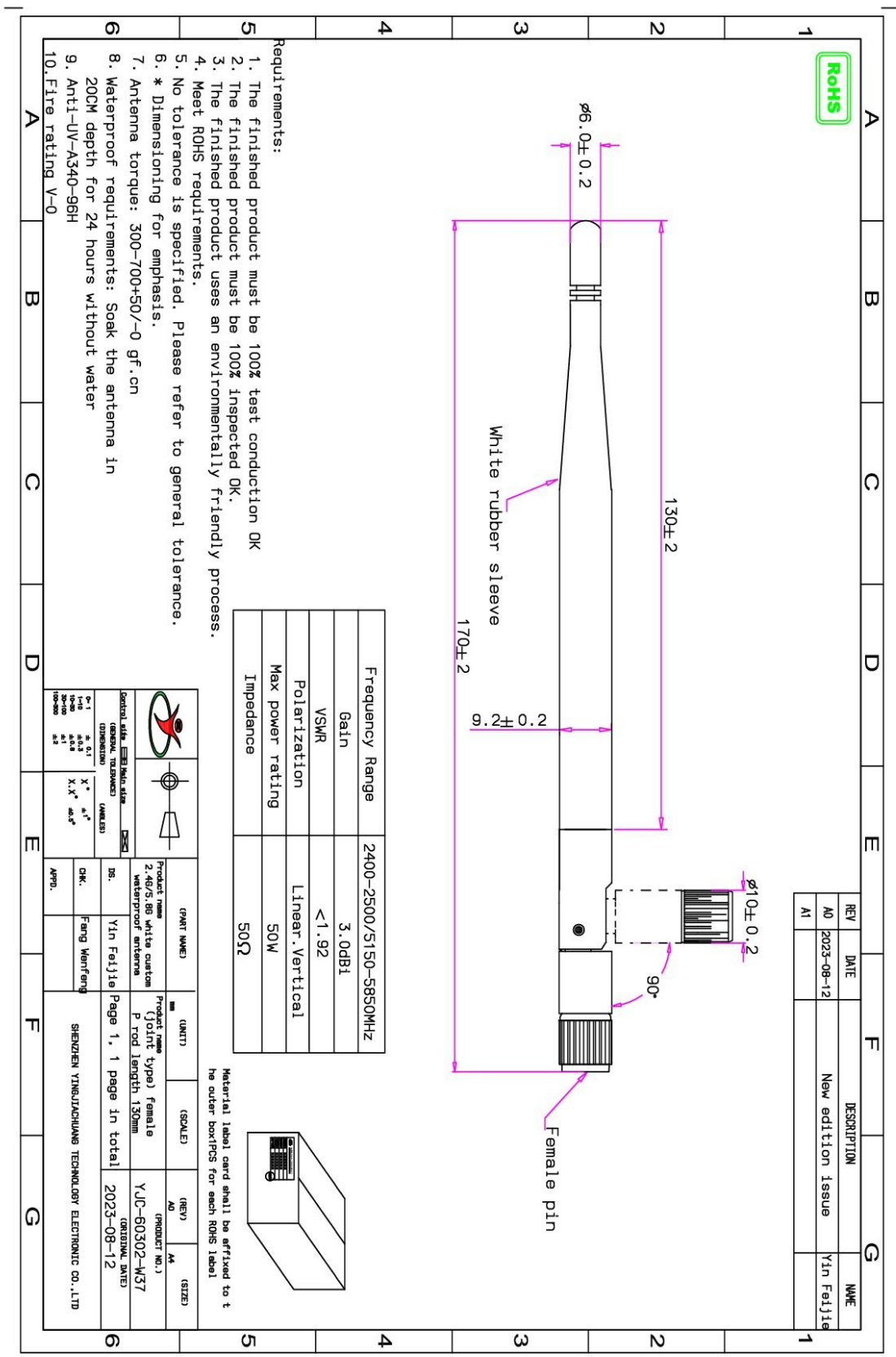


resume:

Version	Changes and reasons	date	publish
A0	Issued	August 12th, 2023	



Antenna plan:





Antenna technical parameters and environmental testing:

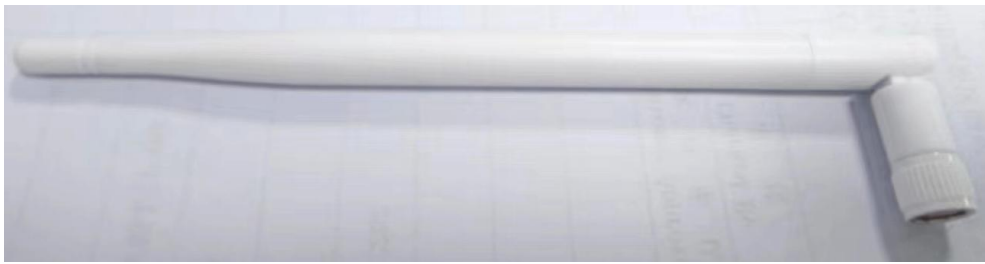
Electrical technical parameter			
Electrical Specifications		Mechanical Specifications	
Frequency Range	2400-2500/5150-5850M Hz	Antenna Color	White
VSWR	<1.92	Input connector	SMA
Input Impedance	50 Ω	Working Temperature	-20℃~+70℃
Direction	All	Working Humidity	20%~80%
Gain	3.0 dBi		

Environmental performance test:

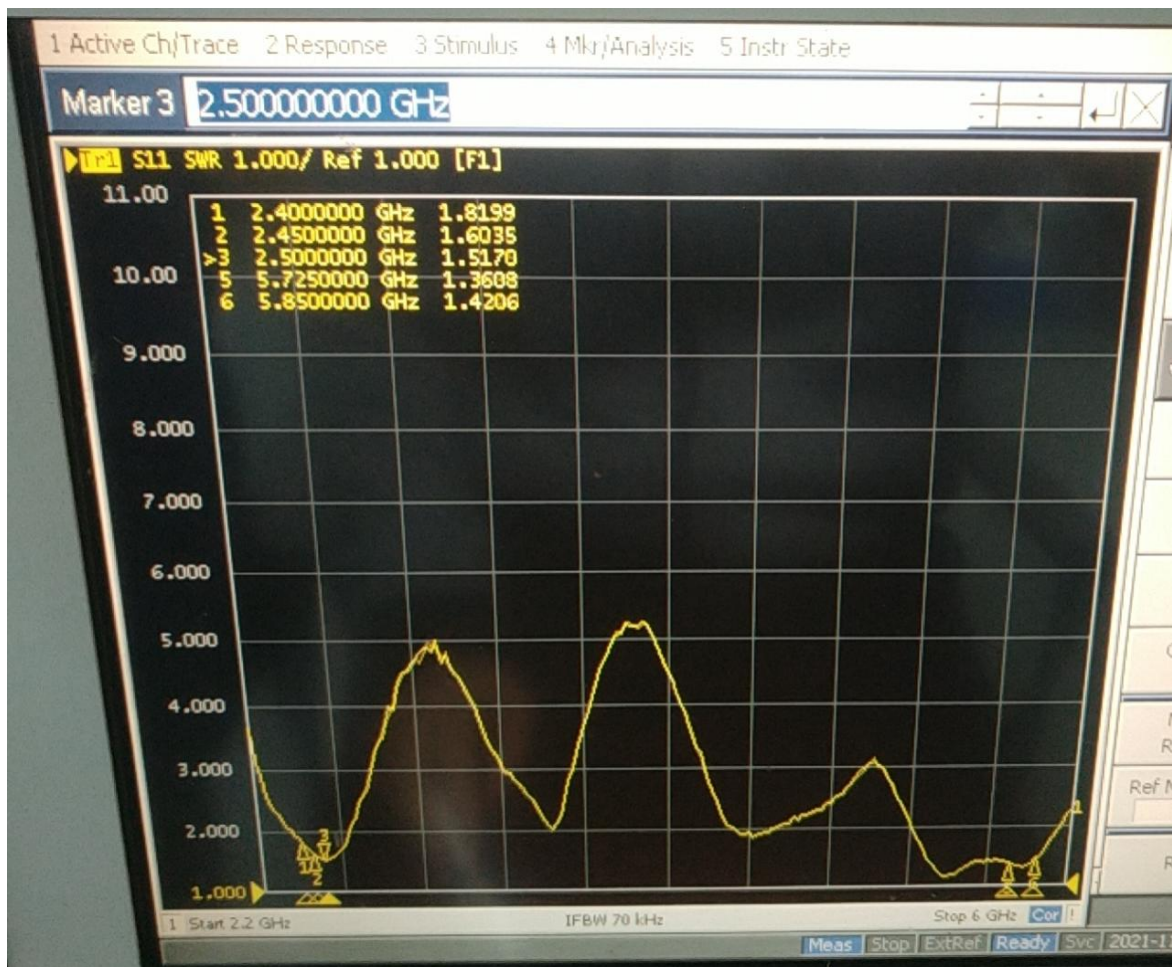
Project	Test condition	Standard
Storage Conditions	In the absence of specified test temperature, humidity, air pressure is as follows:: 1. Temperature is - 30 ℃ ~ + 80 ℃ 2. Relative humidity of 45% to 45% 3. Air pressure is 86 kpa to 106 kpa	Electrical and mechanical performace is normal
High and low 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 mechninery 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 mechninery 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 diagram:



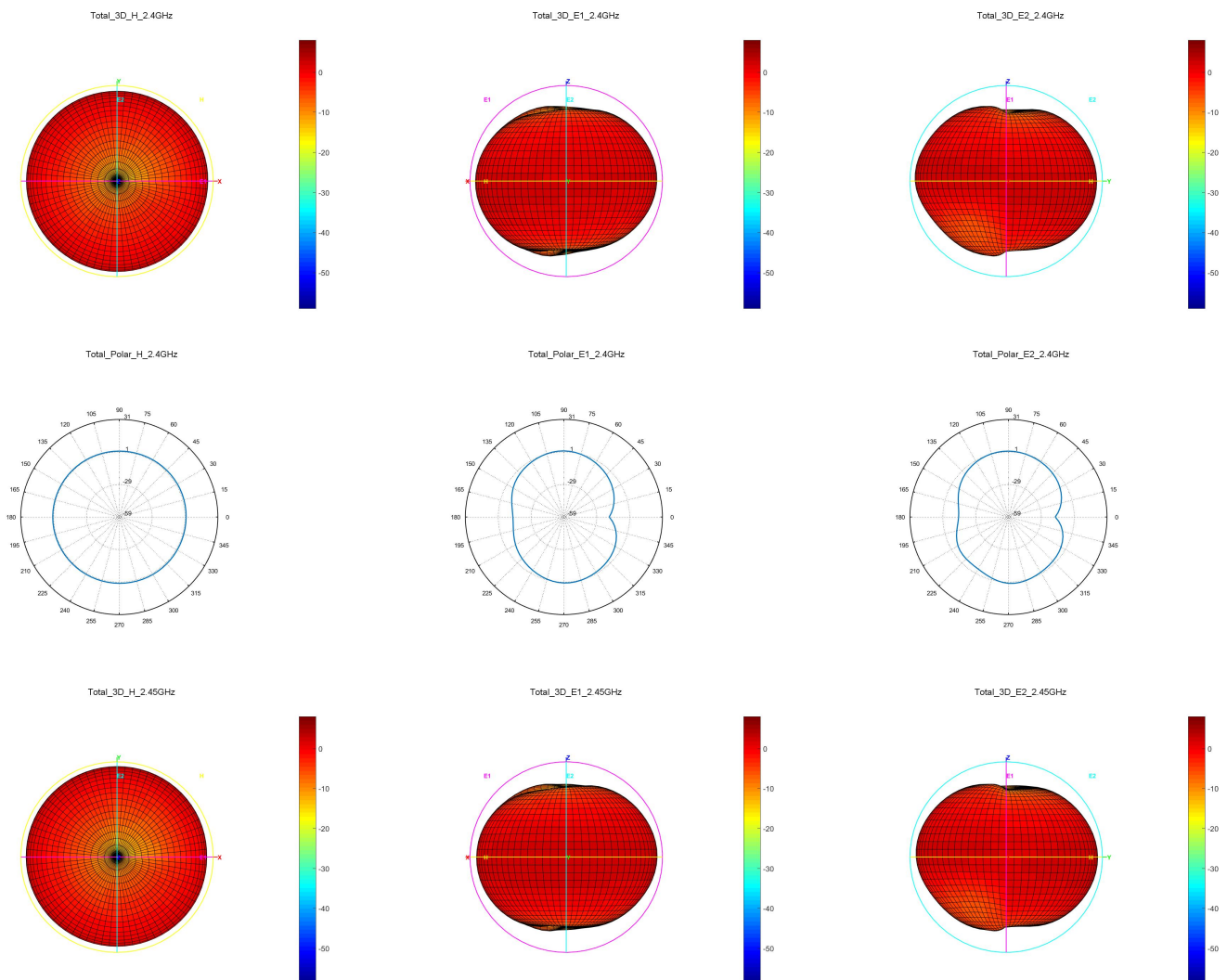
Antenna performance test diagram:





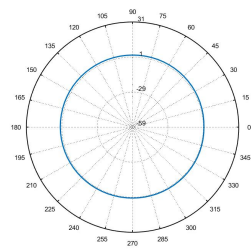
2D and 3D test data (2.4G) :

Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	84.92	2.21
2410MHz	86.70	2.30
2420MHz	87.70	2.49
2430MHz	89.54	2.59
2440MHz	87.90	2.60
2450MHz	87.30	2.68
2460MHz	87.70	2.77
2470MHz	87.10	2.89
2480MHz	84.92	2.83
2490MHz	86.50	2.81
2500MHz	84.14	2.64

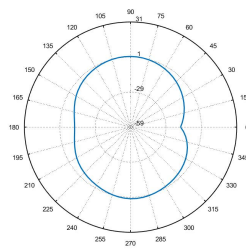




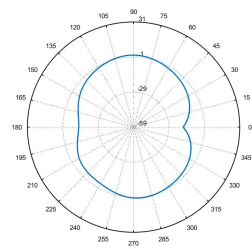
Total_Polar_H_2.45GHz



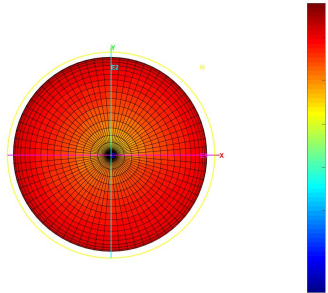
Total_Polar_E1_2.45GHz



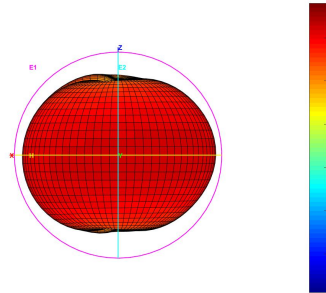
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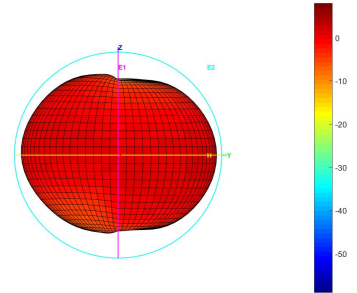
Total_3D_H_2.5GHz



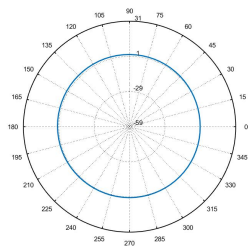
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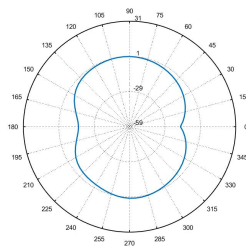
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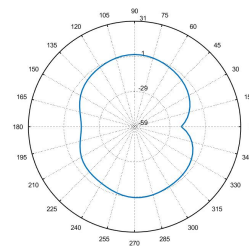
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Total_Polar_E1_2.5GHz



Total_Polar_E2_2.5GHz

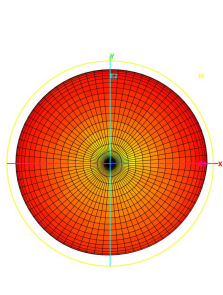




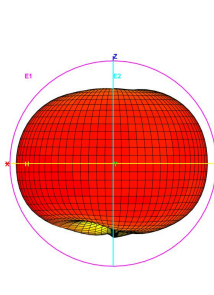
2D and 3D test data (5.8G) :

Frequency	Efficiency (%)	Gain. (dBi)
5150MHz	66.53	1.44
5250MHz	78.16	2.02
5350MHz	74.64	2.32
5450MHz	81.10	2.55
5550MHz	73.62	2.06
5650MHz	73.96	1.98
5750MHz	71.12	2.19
5850MHz	62.52	1.47

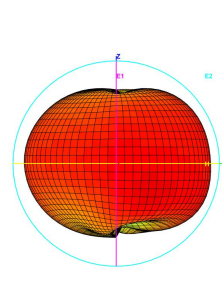
Total_3D_H_5.15GHz



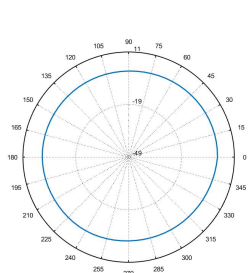
Total_3D_E1_5.15GHz



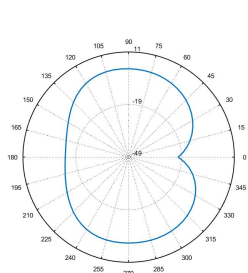
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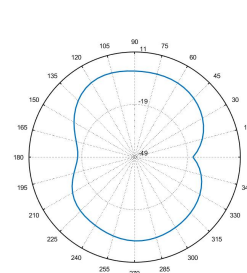
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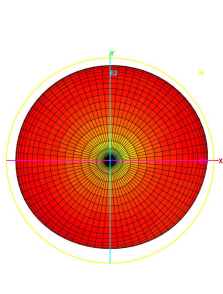
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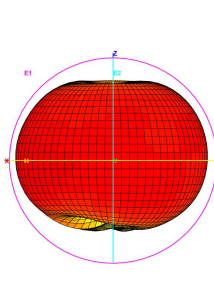
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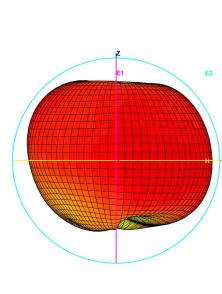
Total_3D_H_5.45GHz



Total_3D_E1_5.45GHz

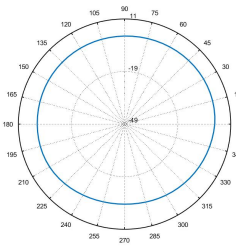


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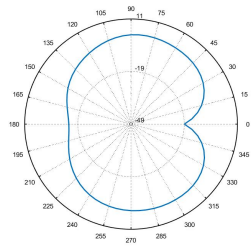




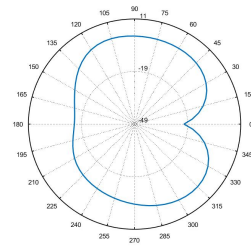
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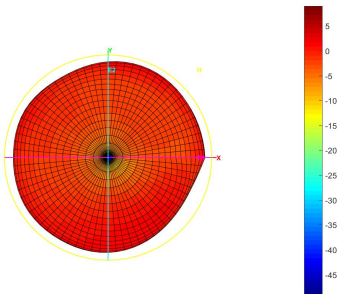
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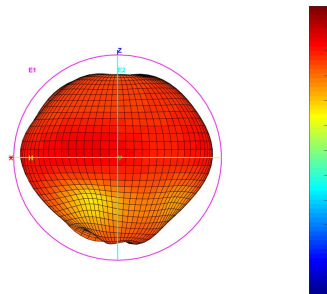
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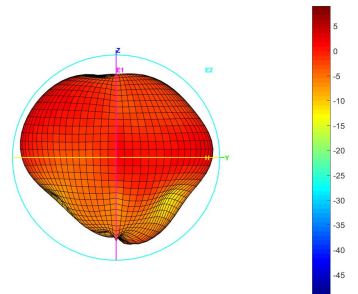
Total_3D_H_5.85GHz



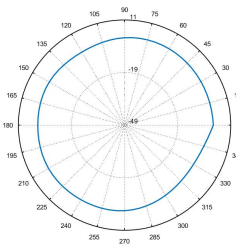
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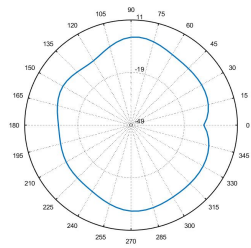
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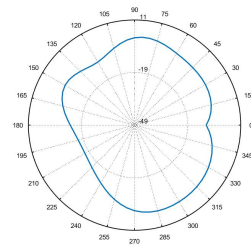
Total_Polar_H_5.85GHz



Total_Polar_E1_5.85GHz



Total_Polar_E2_5.85GHz





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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
Pole sleeve + fire protection	TPEE	CANEC23000634202	SGS	23/03/13	ND	ND	ND	ND	ND	ND	PASS
	PC	SZXML2300036201	SGS	23/03/02	ND	ND	ND	ND	ND	ND	PASS
Copper pipe	Brass strip	NGBEC23001873103	SGS	23/05/18	ND	17	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
Wire rod	Coaxial cable	CANEC2301851701	SGS	23/02/23	ND	ND	ND	ND	ND	ND	PASS
Heat shrink bushing	Heat shrink bushing	CANEC2226901506	SGS	22/12/21	ND	ND	ND	ND	ND	ND	PASS
Silicone plug	Silica gel	CANML2220121001	SGS	22/10/18	ND	ND	ND	ND	ND	ND	PASS
SMA	Orichalcum	CANEC2300141006	SGS	23/01/10	ND	26046	ND	ND	ND	ND	PASS
	Rubber core	SHAEC22000767002	SGS	22/08/23	ND	ND	ND	ND	ND	ND	PASS
	Nickel	SZSEC2203378506	SGS	22/10/25	ND	ND	ND	ND	ND	ND	PASS