DELIN COMM LIMITED
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Specification For Approval

Customer

Supplier **Deyuan Technology (Shenzhen)**

brand of supplier DeliNCOMM

ProductionName **Rod antenna**

ProductionNumber AR109-2.4~5.8G-SZ-N

Note: After the customer confirms and stamps, please return this confirmation letter to our company.
Email: info@delincomm.com

Supplier Signature		
Engineer	Checked by	Approved by
Li Weiqiang	Huangwen	Liu Yijia
August 3, 2023	August 3, 2023	August 3, 2023

support@delincomm.com

Customer Signature		
Engineer	Checke by d	Approved by
年 月 日	年 月 日	年 月 日

https://www.delincomm.com

Description Record

Version	Content Revised	Modifier	Date
A/1.0	Initial creation	Wu Fengyuan	2023.08.03

Directory

Electrical parameters:

Frequency	2.4~2.5GHz 5.15-5.85GHz
Impedance	50Ω
S.W.R.	≤2.0
Claiming Antenna Gain	3.0dBi±0.5
sPolarization	Vertical polarization
Return Loss	-9.2dB MAX

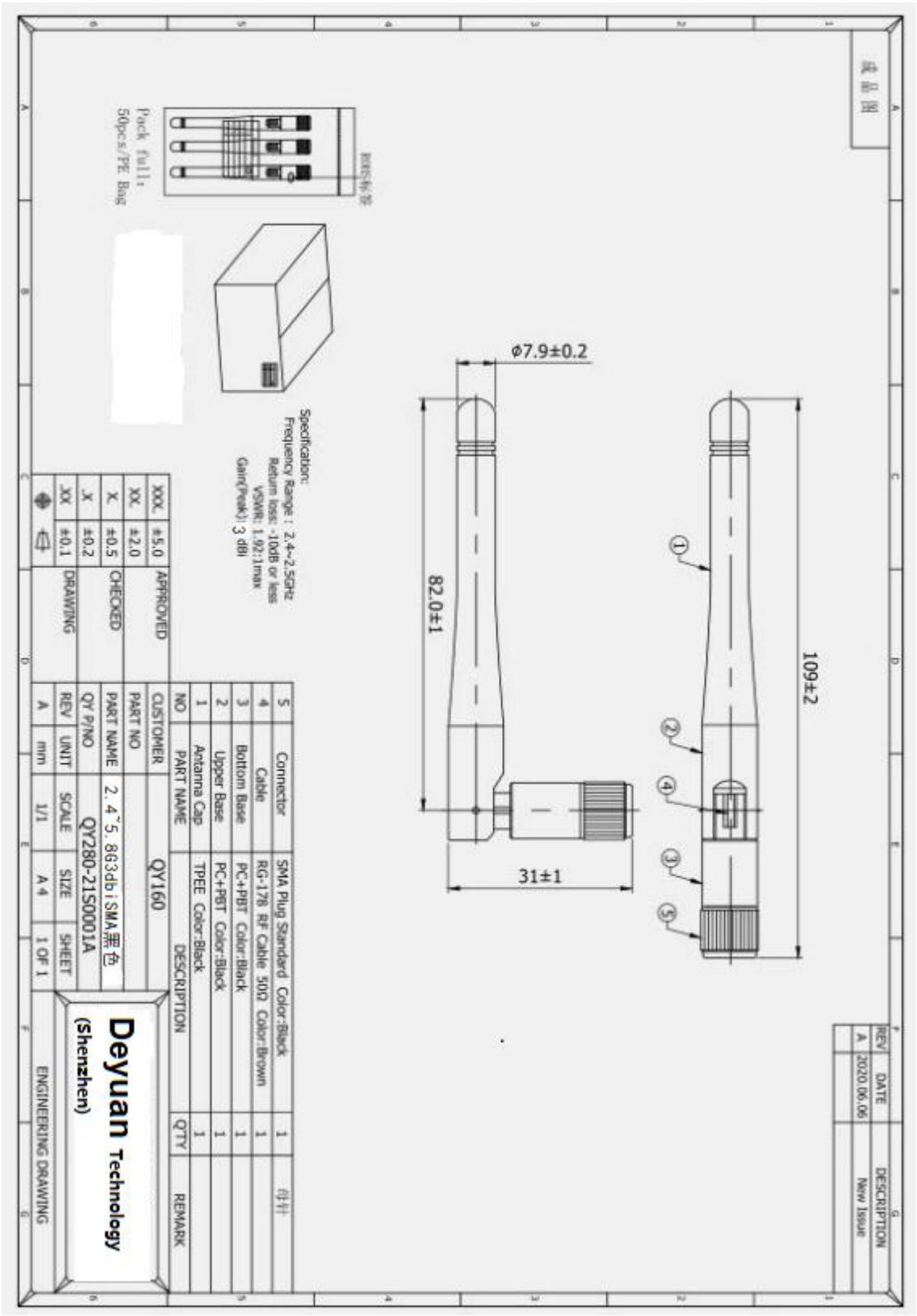
Mechanical parameters:

Antenna Colour	black
RF Cable Model	RG178, Double tin transparent brown
Connect Type	SMA Male and female needles, plastic heads

Operating/ Storage Temperature:

Operating Temperature	-40~85℃
Storage Temperature	-40~85℃

Structural drawings:



Environmental and reliability testing:

environmental test

High and low temperature constant humidity test report

Testproject	High temperature, low temperature, constant humidity test		
Test sample name	Rubber rod antenna	date of observation	2023.03.20
Experimental/Testing Equipment	Constant temperature and humidity test Box inspection network analyser	Number of tests	5PCS
Inspection standards	1. The metal surface coating has no defects such as peeling, cracking, wrinkling, etc; Non metallic parts should not have discoloration, cracking, deformation, delamination, or other defects. 2. Electrical testing meets design requirements; The voltage standing wave ratio test is qualified.		

Test Name	Test items	ask	test method	Actual testing data	result	
					sample	determine
High Temperature Test	Temperature (℃) Temperature stability time of test sample (h) Test duration (h) Recovery time (h)	+80±3 1 1 1	According to GB2423 1-89th chapter Prescribed party Legal progress	+85 1.2 2.3 1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified
Low Temperature	Temperature (℃) Temperature stability time of test sample (h) Test duration (h) Recovery time (h)	-40±3 1 2 1	According to GB2423 1-89th 8th chapter Prescribed Method implementation	-40 1.2 2.4 1.1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified
Constant damp heat test	Temperature (℃) Relative humidity (%) Test duration (h) Recovery time (h)	+40±2 90-95 21 1	According to GB2423 3-93 5th chapter Prescribed party Main line	+42 92 22 1.1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified

Salt spray test

Salt Spray Test Report

Test project	Salt spray test		
Test sample name	Rubber rod antenna	date of observation	2023.03.20
Device Name	Salt spray corrosion test Box inspection	Number of tests	5PCS
test method	Put the test sample into the prepared salt solution test chamber and salt spray corrosion chamber for continuous spray test		
Salt solution concentration	52g/L	Salt solution pH value: 6.5-7.2	Test cycle: 24h
Actual test data	55g/L	Salt solution pH value: 6.8	Test cycle: 26h
Test standards	Conduct the test in accordance with GB/T10125 "Corrosion Test and Salt Spray Test in Artificial Atmospheres"; Results according to GB/T6461-2002 "Metal and other inorganic coatings on metal substrates - Rating of specimens and specimens after corrosion testing" Rating.		

Results

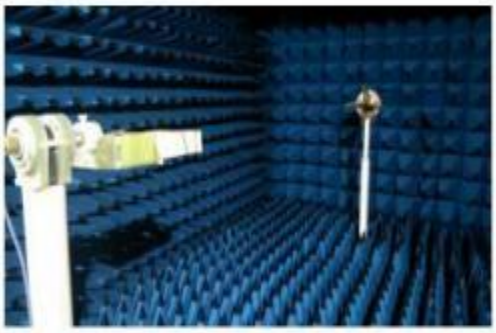
number	Corrosion resistance level	Actual test data	Evaluation results	notes
1	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
2	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
3	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
4	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
5	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	

Test equipment:

安捷伦 E5071C 网络分析仪

HP 8594E 频谱分析仪

CMW-500

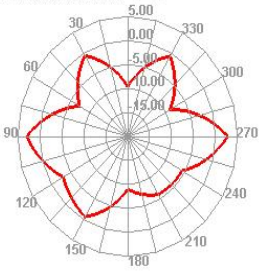


微波暗室

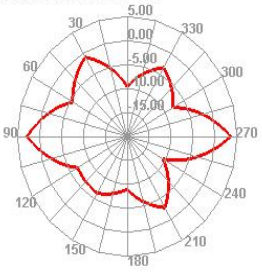
Testing Parameters

Passive Test For 2.4G		
Freq (MHz)	Effi %	Gain (dBi)
2400	76.61	2.76
2410	69.64	2.83
2420	73.42	2.79
2430	71.96	2.86
2440	58.11	1.87
2450	68.39	2.98
2460	71.58	2.93
2470	73.38	2.97
2480	66.48	2.93
2490	79.28	2.72
2500	79.37	2.69

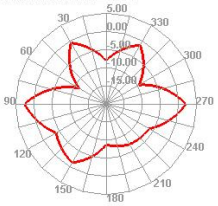
2450.000MHz E1



2450.000MHz E2



2400.000MHz E1



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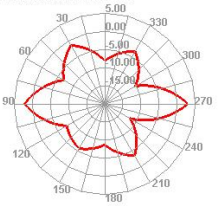
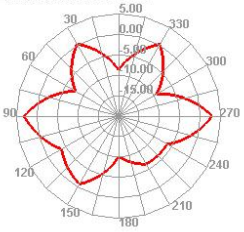


2500.000MHz E1



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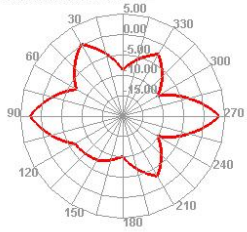
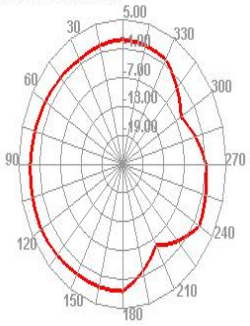
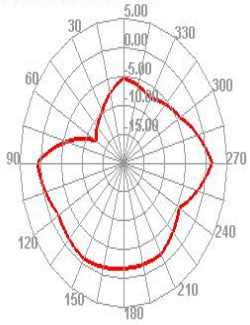


Passive Test For 5G		
Freq (MHz)	Effi %	Gain (dBi)
5150	67.31	2.37
5160	58.36	2.67
5170	72.34	2.74
5180	76.44	2.38
5190	55.38	1.48
5200	68.72	2.37
5250	74.51	2.83
5300	77.38	2.93
5350	69.45	2.94
5400	76.28	2.76
5450	72.37	2.68
5500	76.15	2.94
5550	63.74	2.76
5600	75.57	2.68
5650	74.62	1.93
5700	68.61	2.76
5750	71.64	2.97
5800	78.86	2.92
5850	67.81	2.83

5150.000MHz H



5150.000MHz E1



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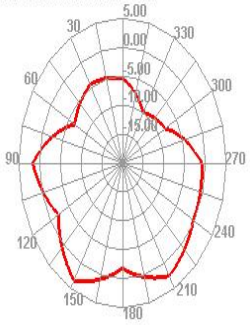
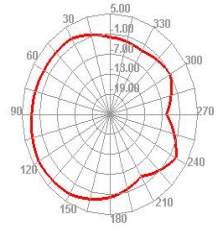
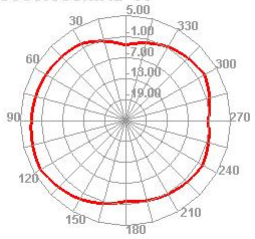


5500.000MHz H



5850.000MHz H



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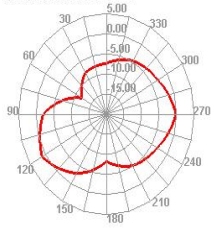
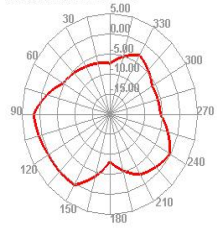


5500.000MHz E2



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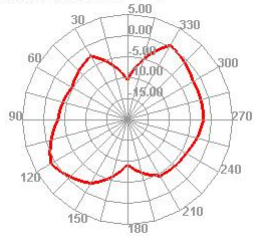

5850.000MHz E2