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Project Report

Customer Name: Norco

Project Name: Electric Fish Fin

Development Project Number:

Version number: V1.0

Structural Engineer: Tang Hailin

RF Engineer: Wang Xiaohan

Reviewer: Liu Lihua

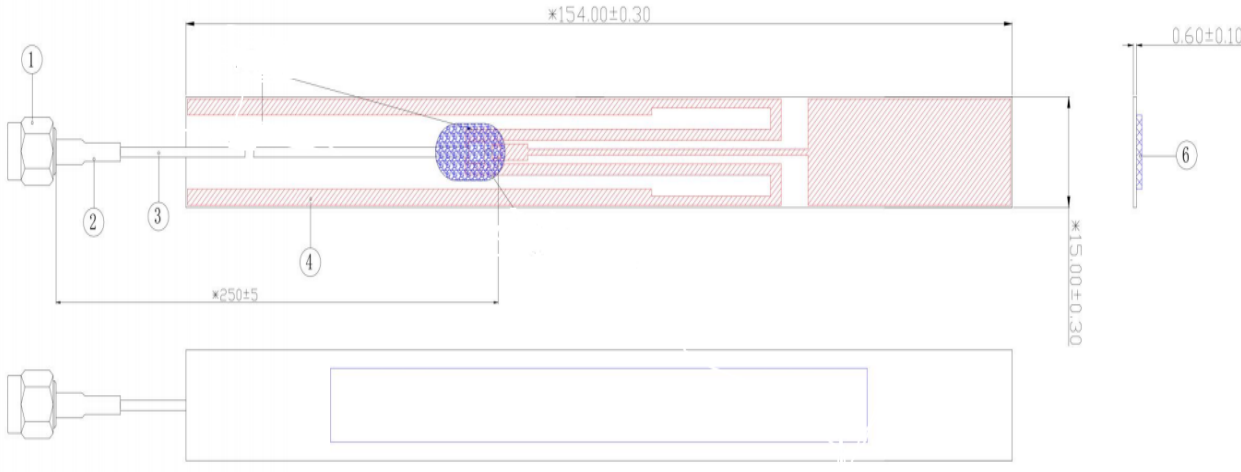
Production Date: 20260724

Revision Date Revision Content Reviser Original Version			
20260724	Initial version	Wang Xiaohan V1.0	

四川博安通通信技术有限公司

Specifications: Built-in antenna, 915MHz

PCB dimensions: 154 x 15 x 0.6 mm



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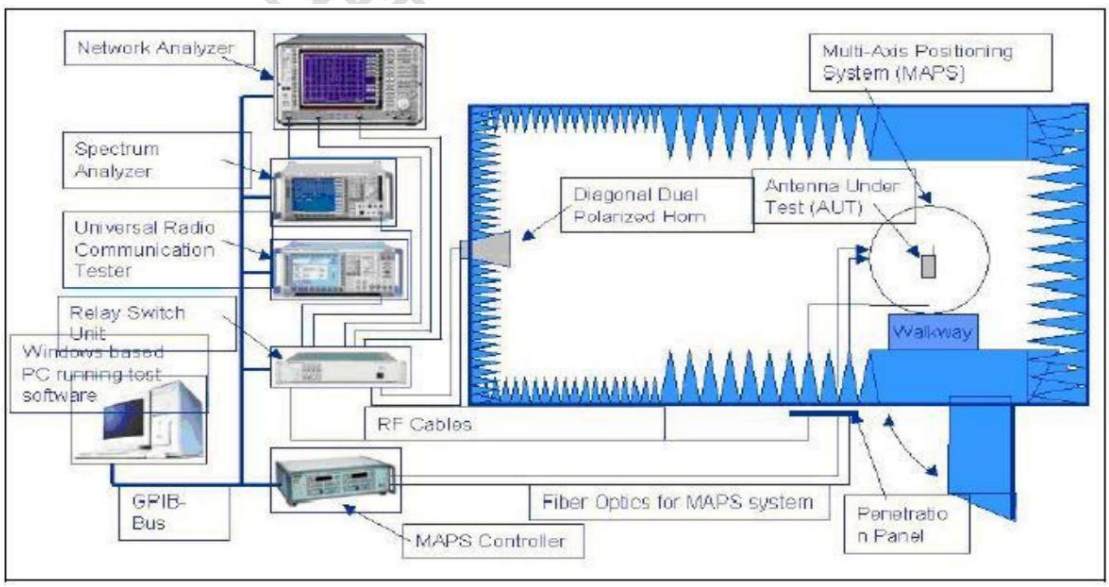
I. Explanation

This report summarizes the electrical performance results of the antenna for the electric fin project, including the antenna's S11 parameters.

Contents on efficiency, gain, etc., along with corresponding conclusions.

II. Antenna installation diagram and actual image of a single antenna

III. Schematic diagram of microwave anechoic chamber testing principle



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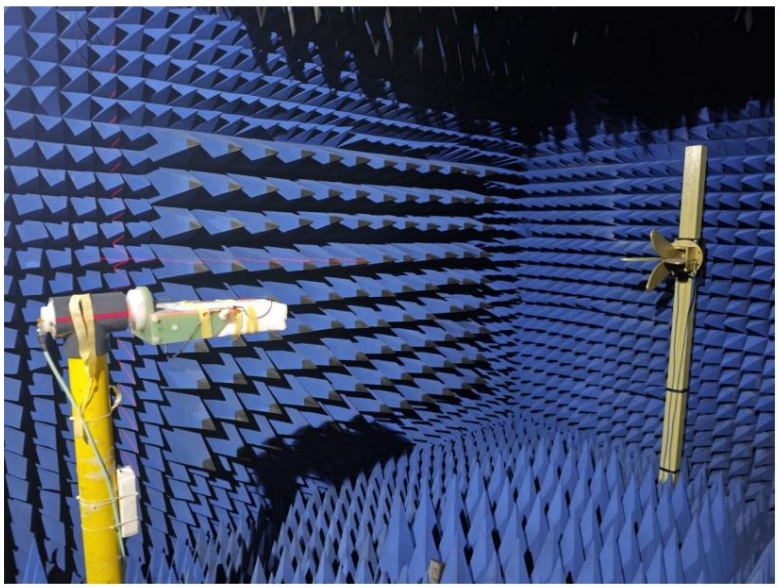
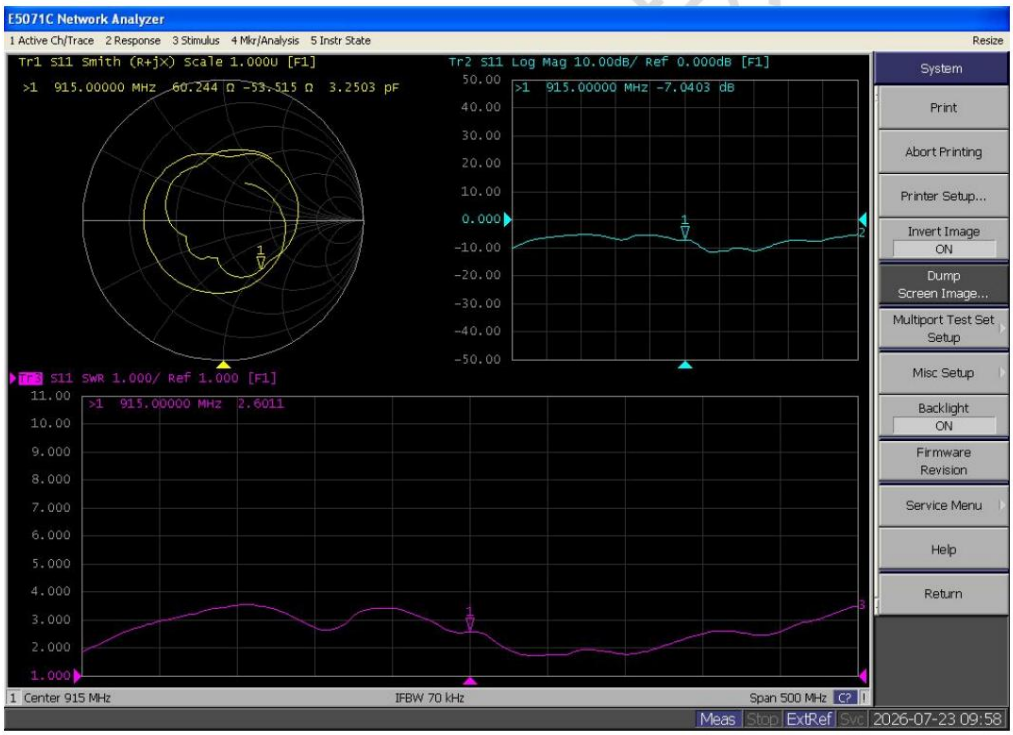
IV. Placement of the Antenna Testing Anechoic Chamber



V. Passive Antenna Test Data (Confirmed: ÿ Whole System Test ÿ Single Antenna Test)

Antenna S11 parameter diagram



ÿStanding Wave Ratio Data

Freq/MHz 915MHz	
VSWR	2.6

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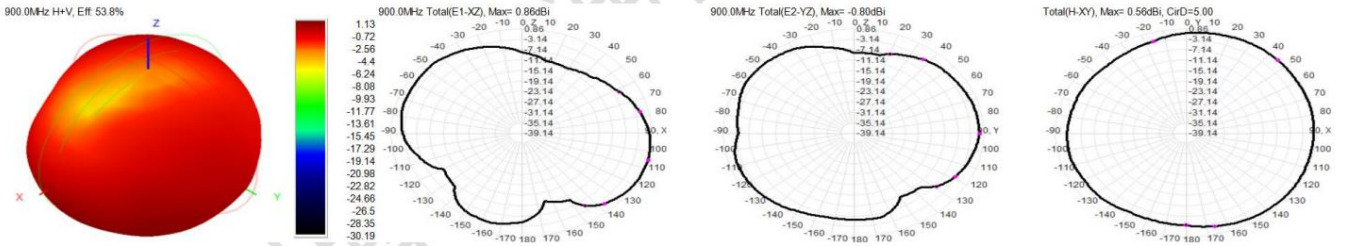
Antenna anechoic chamber test data

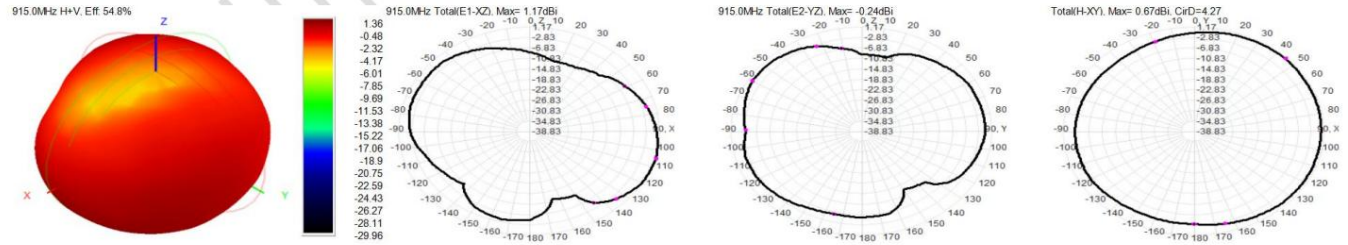
Frequenc	Efficiency	Gain (dBi)	Efficiency
900.0	-2.69	1.13	53.77
905.0	-2.68	1.14	53.92
910.0	-2.63	1.26	54.62
915.0	-2.62	1.36	54.76
920.0	-2.77	1.26	52.81
925.0	-2.80	1.17	52.46
930.0	-2.85	1.24	51.91

Antenna pattern

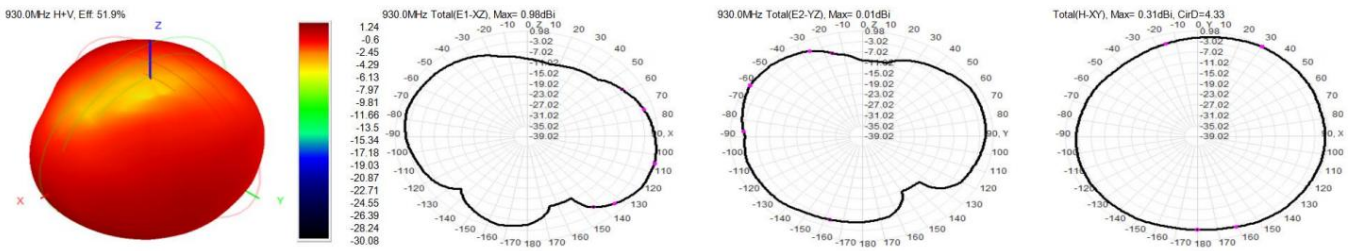
900M 3D-E1-E2-H



915M 3D-E1-E2-H



930M 3D-E1-E2-H



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Electrical performance parameters description

parameter property	Parameter name	Required value
Electrical performance	Antenna frequency band	915MHz
	Frequency range	900~930MHz
	Characteristic impedance	50Ω
	Standing Bobby	≤2.6
	Power capacity	＜10W
	polarization mode	linear polarity
	Radiation direction	Omnidirectional
	Gain	≥1.13dBi，≤1.36dBi
	efficiency	≥51%，≤55%
	Reflection loss	≤-7.04dB
	single antenna weight	G/PCS

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