



Design Specifications	Typical	Units
天线形式 Antenna form	FPC+端子线 FPC+Terminal wire	
工作频率(working Frequency)	860-930	MHz
增益 (Gain)	-3.04~ -1.80	DBi
天线效率 (Antenna efficiency)	27.69~36.15	%
电压驻波比 (VSWR)	<4	
极化方式(Polarization)	线极化 Line polarization	
轴比(Axial Ratio)	当天线为圆极化时，备注在工作带宽内的轴比大小 When the antenna is circularly polarized, note the axial ratio size within the operating bandwidth	N/A
辐射方向(Radiation pattern)	全向 Omnidirectional	
馈电阻抗(impedance)	50 ohm	
功率容量(Power handling)	33	dBm
天线接口(Interface)	IPEX	
天线尺寸(Overall dimensions)	见图纸部分 See the drawings section	
重量(Weight)	无要求 No requirements	
工作温度(Operatin Temp)	-30 ----- 70	°
储存温度(Storing Temp)	-30 ----- 70	°

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DSGW-090 ZWAVE 天线规格书

1、规格：报告主要提供 DSGW-090 ZWAVE 天线的各项电性能参数的测试状况。（如下图一所示）

The report mainly provides the test status of various electrical performance parameters of the DSGW-090 ZWAVE antenna



图一 DSGW-090 ZWAVE 天线

2、电器性能 Electrical performance

2.1 规格标准 Specification standards

DSGW-090 ZWAVE 天线工作频段在 **860-930MHz**。

DSGW-090 ZWAVE the antenna operating frequency band is in 860-930MHz.

2.2 天线的匹配电路 The matching circuit of the antenna

DSGW-090 ZWAVE 天线匹配主板自带匹配。

DSGW-090 ZWAVE The matching circuit of the antenna

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2.3 驻波比(VSWR)的测试 Testing of standing wave ratio (VSWR).

A. 测试的设置

VSWR 测试装置依次连接为：8714ET 网络分析仪 → 50 欧姆的同轴 Cable → 120mm 长的铜管 → 测试治具。

测试治具的处理：从天线 50 欧姆测试点处用一根电缆引出 SMA 接头，与套有扼流圈的铜管连接，再依次连接其他装置。

The VSWR test rig is connected sequentially: 8714ET Network Analyzer → 50 ohm coaxial cable → 120mm long copper tube test fixture.

Treatment of test fixtures: Lead the SMA connector with a cable from the antenna 50 ohm test point, connect it with a copper tube with a choke, connect other devices in turn.

B. VSWR

下表所示为 DSGW-090 ZWAVE 天线工作频段边缘频点的驻波比数值。测试所得的 VSWR, 相关波形图如附件所示。

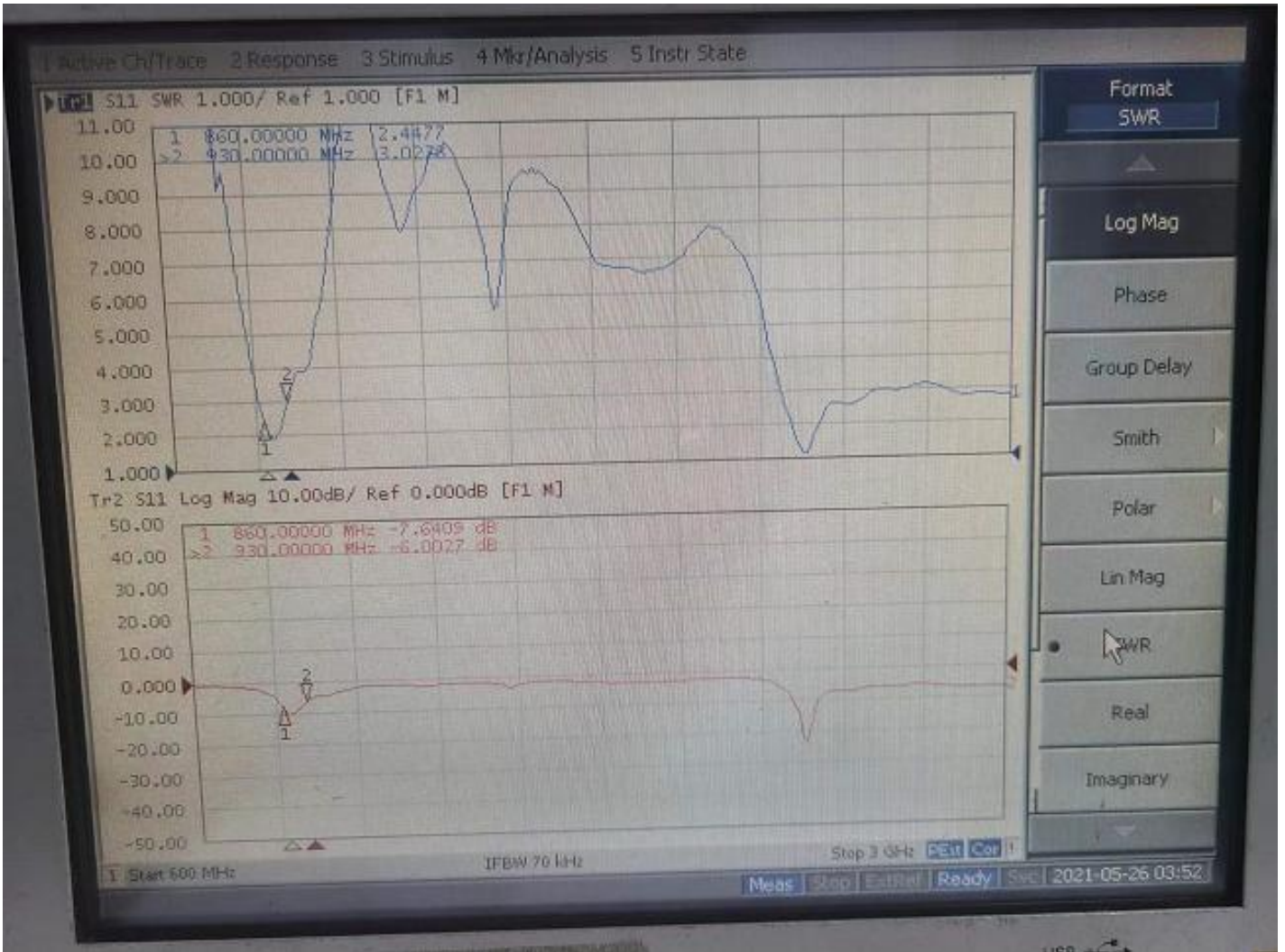
The following table shows the VSWR values at the edge frequency points of the operating band of the DSGW-090 ZWAVE antenna. The resulting VSWR, the relevant waveform plot is shown in the attachment.

频段	频率 (MHz)	VSWR
Z-WAVE	860	2.45
	930	3.03

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2.3.1 S11 参数



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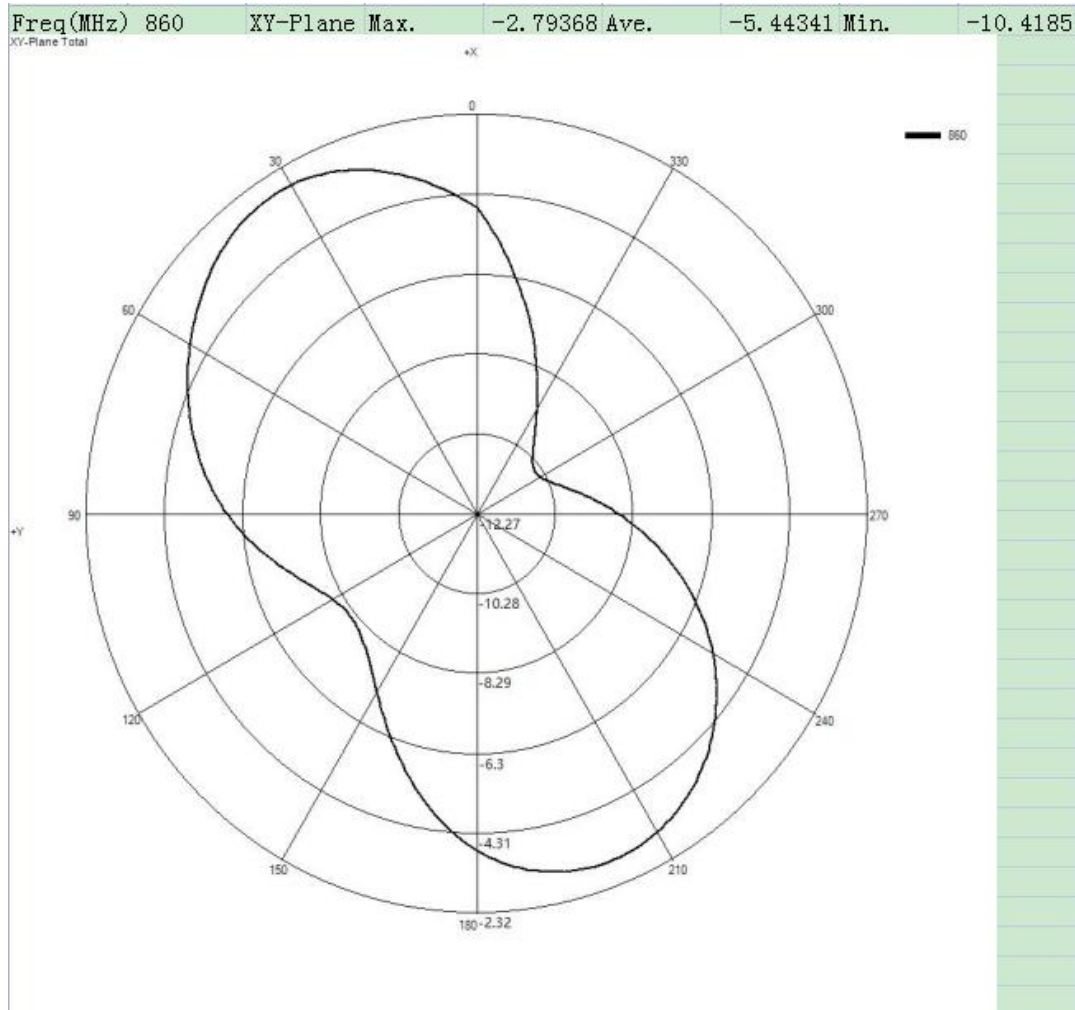
2.3.2 无源天线效率 Passive antenna efficiency

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
860	-2.34	-5.08	31.05
862	-2.35	-5.00	31.65
864	-2.30	-4.92	32.24
866	-2.23	-4.84	32.80
868	-2.10	-4.77	33.36
870	-1.96	-4.69	33.94
872	-1.90	-4.64	34.33
874	-1.97	-4.63	34.43
876	-2.07	-4.61	34.56
878	-2.07	-4.58	34.81
880	-2.00	-4.54	35.19
882	-1.92	-4.48	35.65
884	-1.83	-4.44	35.96
886	-1.80	-4.42	36.15
888	-1.82	-4.44	35.98
890	-1.85	-4.49	35.53
892	-1.91	-4.50	35.48
894	-1.91	-4.49	35.57
896	-1.88	-4.49	35.58
898	-1.89	-4.50	35.46
900	-1.96	-4.55	35.06
902	-2.06	-4.59	34.72
904	-2.19	-4.66	34.20
906	-2.25	-4.72	33.75
908	-2.21	-4.75	33.50
910	-2.23	-4.80	33.10
912	-2.32	-4.91	32.31
914	-2.44	-5.01	31.53
916	-2.51	-5.11	30.85
918	-2.57	-5.19	30.26
920	-2.69	-5.26	29.78
922	-2.83	-5.28	29.66
924	-2.79	-5.30	29.48
926	-2.83	-5.37	29.06
928	-2.93	-5.47	28.39
930	-3.04	-5.58	27.69

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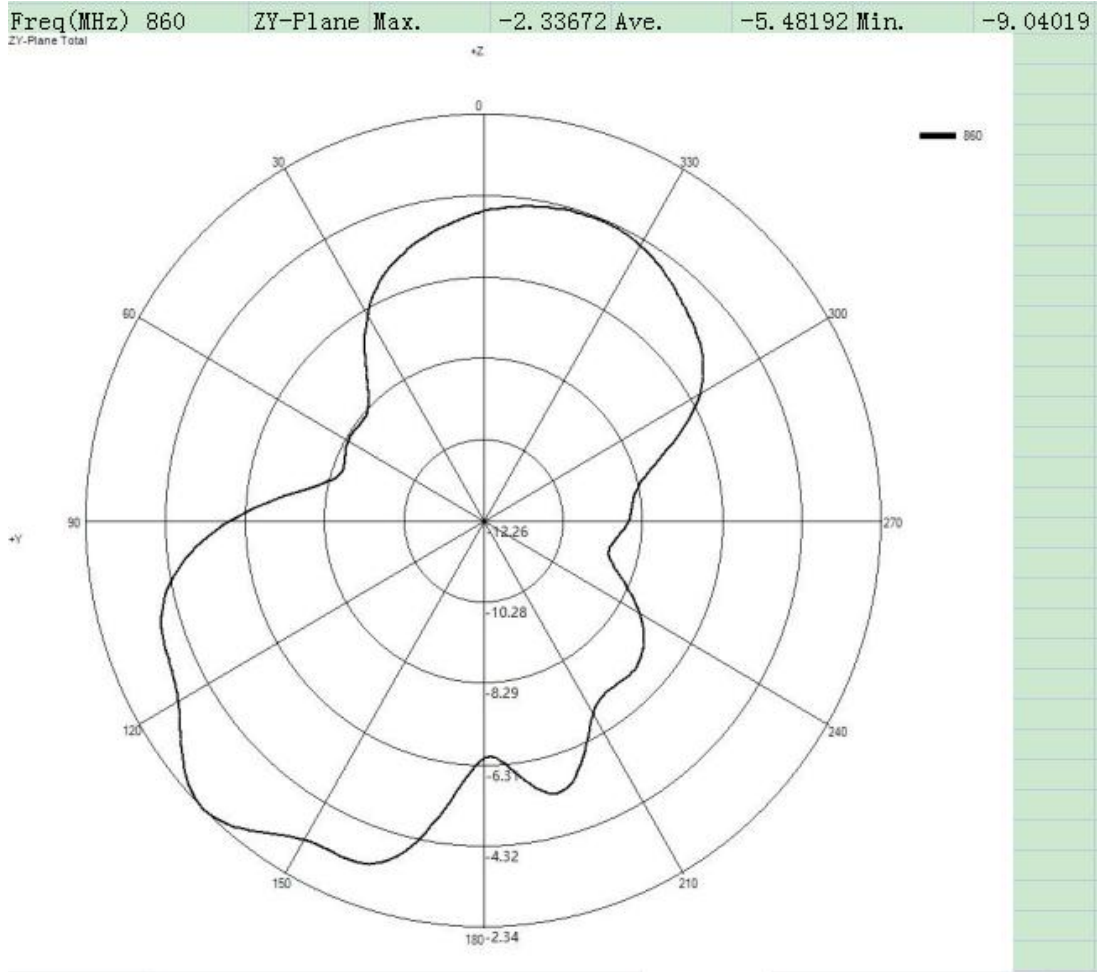
2.3.3 方向图



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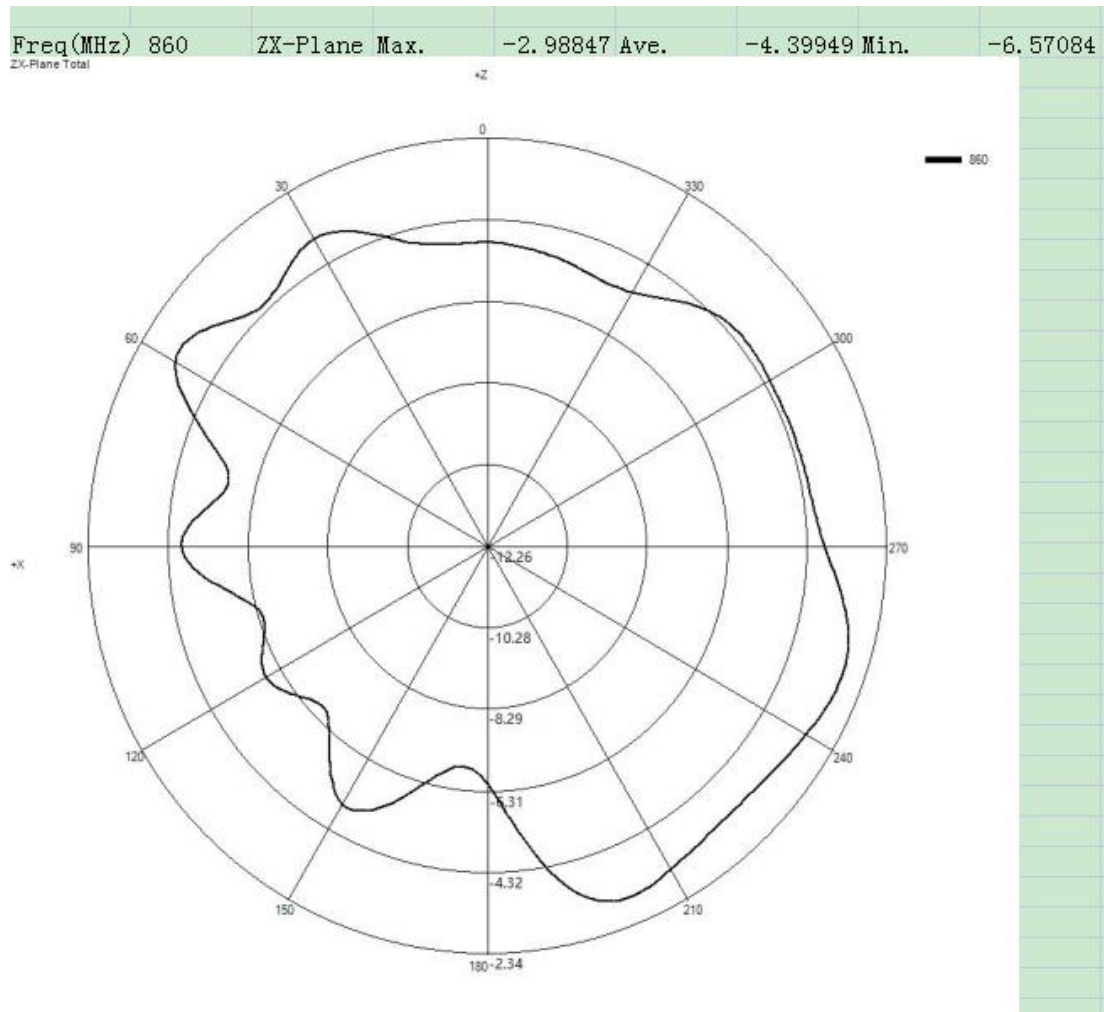
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3、建议与结论 Recommendations and conclusions

此报告是根据客户提供 DSGW-090 ZWAVE 天线的最终版测得的天线电气性能。
 从如上测试数据可以看到，此天线提供了较好的电气性能。
 维力谷研发期盼您的确认，谢谢合作！

This report is based on the measured electrical performance of the antenna based on the final version of the DSGW-090 ZWAVE antenna provided by the customer.
 From the above test data, it can be seen that this antenna provides better electrical performance.
 Veligu R&D looks forward to your confirmation, thank you for your cooperation!

4、图面样品、外观见附档：

Drawing sample, appearance see attached file:

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