



| Design Specifications | Typical | Units |
|--------------------------------|--|-------|
| 天线形式 Antenna form | FPC+端子线 FPC+Terminal wire | |
| 工作频率(working Frequency) | 2400-2500 | MHz |
| 增益 (Gain) | -0.44 ~ -0.09 | dBi |
| 天线效率 (Antenna efficiency) | 29.80 ~ 37.38 | % |
| 电压驻波比 (VSWR) | <3 | |
| 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 | ° |

www.vlg.com.cn

VLG has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

DSGW-090 BT 天线规格书

1、规格：报告主要提供 DSGW-090 BT 天线的各项电性能参数的测试状况。

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



图一 DSGW 090 BT

2、电器性能 Electrical performance

2.1 规格标准 Specification standards

DSGW-090 BT 天线工作频段在 **2400-2500MHz**。

The DSGW-090 BT antenna operates in the frequency band of 2400-2500MHz.

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

DSGW-090 BT 天线匹配主板自带匹配。

The DSGW-090 BT antenna matching motherboard comes with matching.

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

2.3 驻波比(VSWR)的测试

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 BT 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。

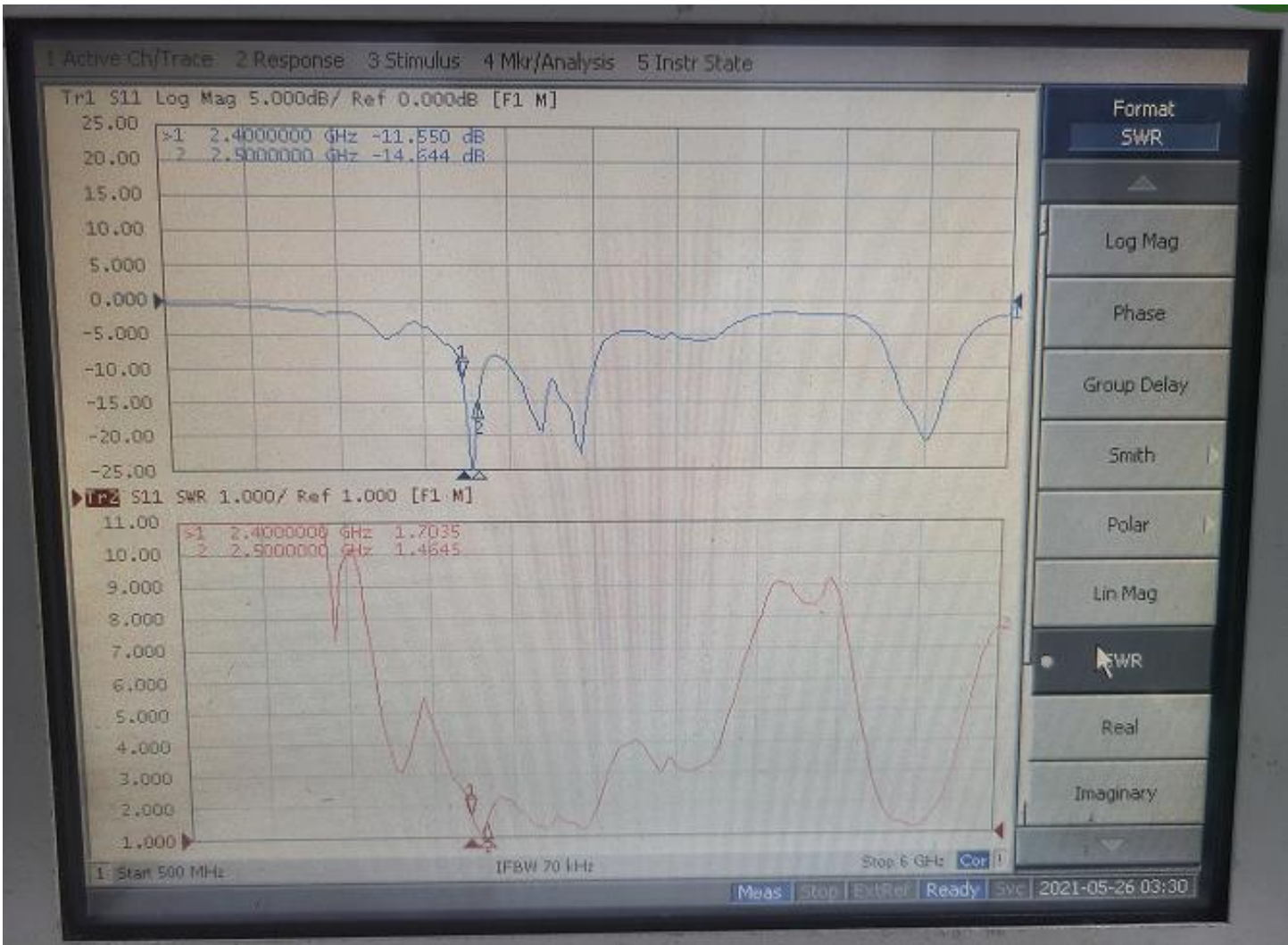
The following table shows the VSWR values at the edge frequency points of the operating band of the DSGW-090 BT antenna. The resulting VSWR, correlation waveform plot is shown in the attachment.

| 频段 | 频率 (MHz) | VSWR |
|----|----------|------|
| BT | 2400 | 1.70 |
| | 2500 | 1.46 |

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

2.3.1 S11 参数



www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

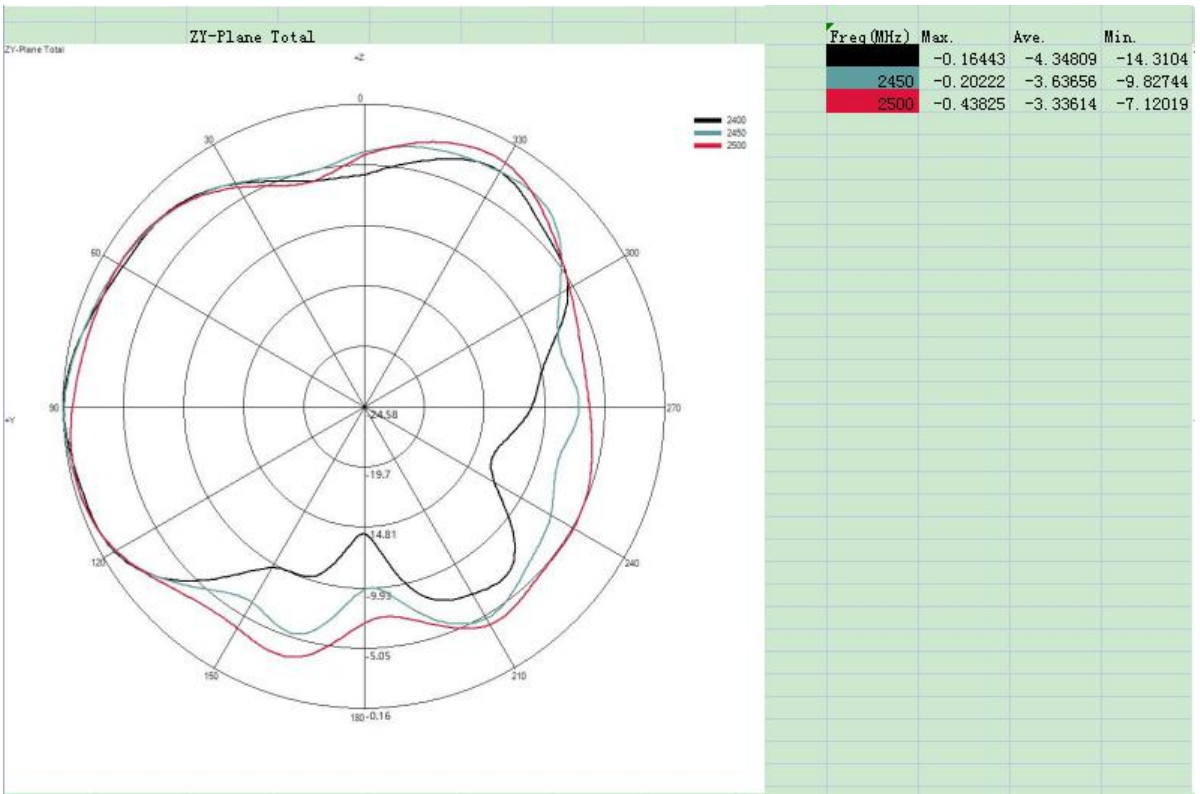
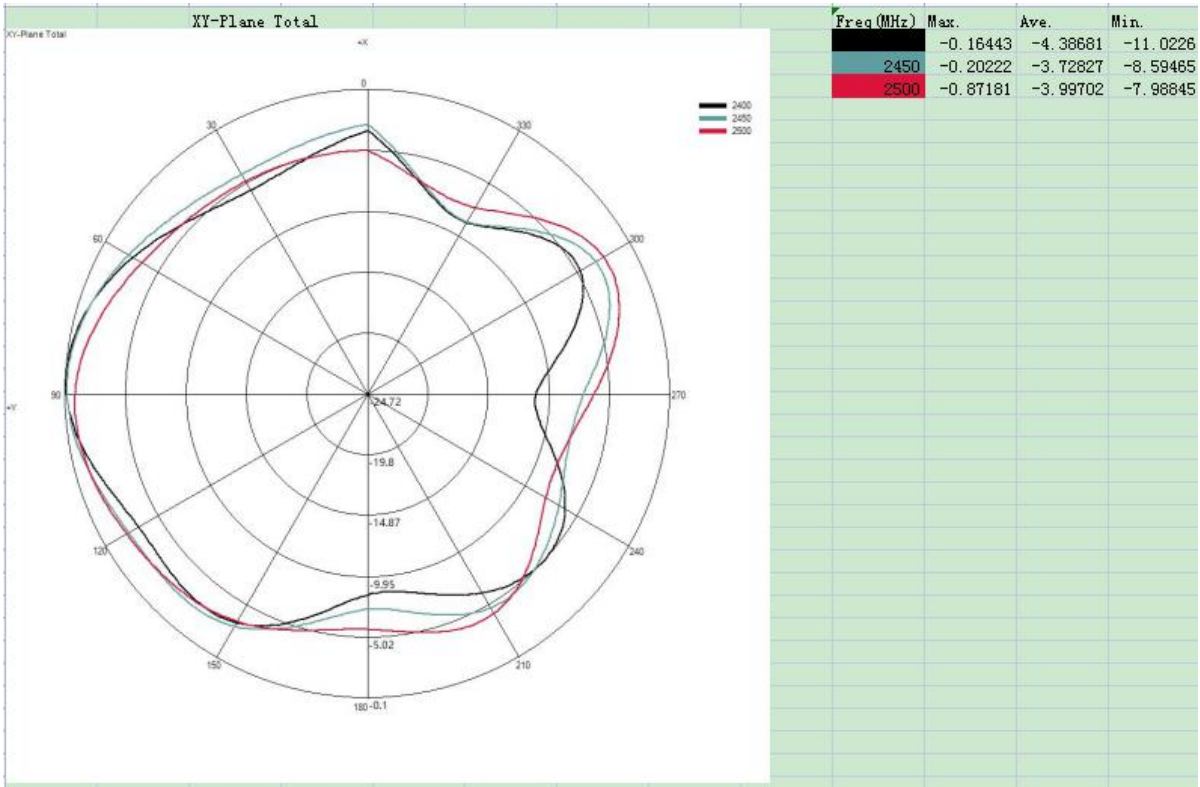
2.3.2 无源天线效率

| Freq(MHz) | Gain(dBi) | Efficiency(dB) | Efficiency(%) |
|-----------|-----------|----------------|---------------|
| 2400 | -0.16 | -5.26 | 29.80 |
| 2410 | -0.18 | -5.17 | 30.39 |
| 2420 | -0.11 | -5.03 | 31.41 |
| 2430 | -0.13 | -4.89 | 32.44 |
| 2440 | -0.18 | -4.79 | 33.17 |
| 2450 | -0.20 | -4.57 | 34.92 |
| 2460 | -0.22 | -4.42 | 36.12 |
| 2470 | -0.16 | -4.31 | 37.05 |
| 2480 | -0.09 | -4.27 | 37.38 |
| 2490 | -0.16 | -4.28 | 37.29 |
| 2500 | -0.44 | -4.51 | 35.42 |

www.vlg.com.cn

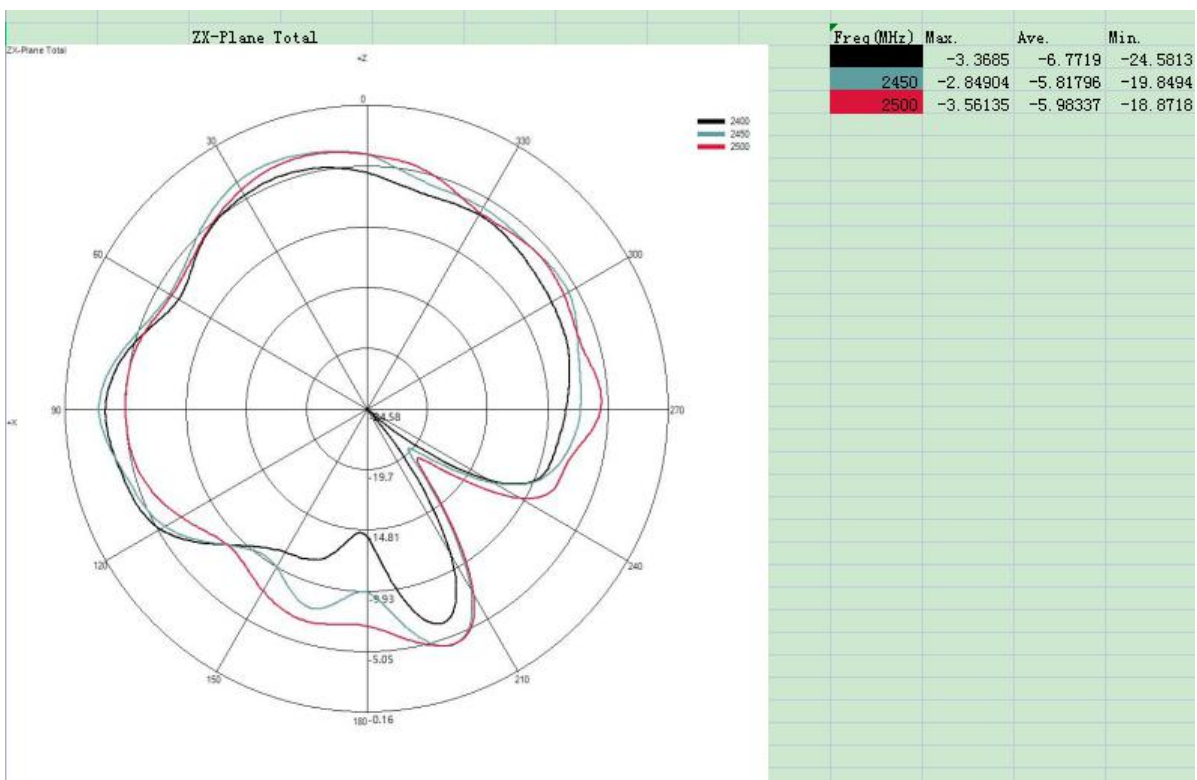
VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

2.3.3 方向图



www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



3、建议与结论

此报告是根据客户提供 DSGW-090 BT 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！

of the DSGW-090 BT antenna provided by the customer.

From the above test data, it can be seen that this antenna provides better electrical performance.

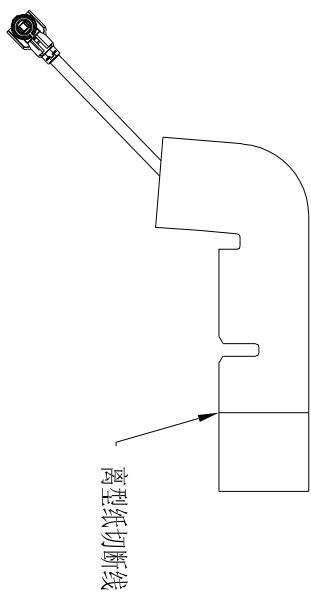
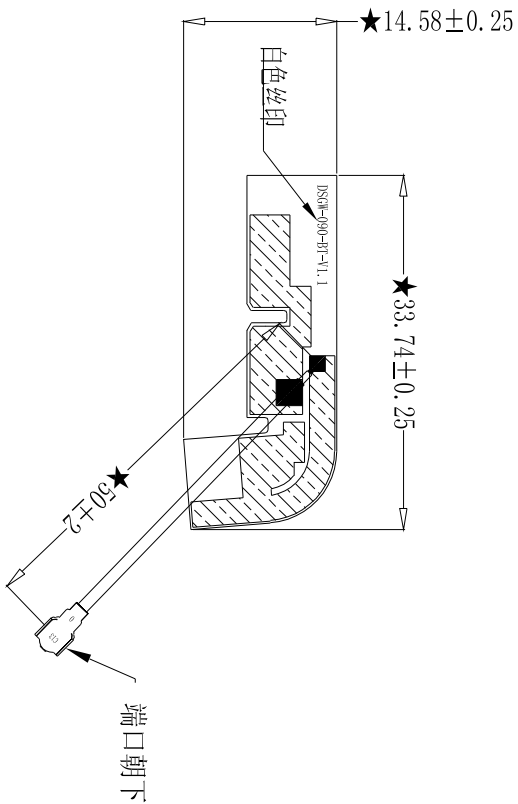
Veligu R&D looks forward to your confirmation, thank you for your cooperation!

4、图面样品、外观见附档：

Drawing sample, appearance see attached file:

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



- 注:
- 1、打*为配合尺寸,打*为重点尺寸;
 - 2、打*为必测尺寸,其它尺寸以实配为准;
 - 3、外观不得有色差、划伤、毛边、露铜,丝印不良,撕手未切断等缺陷;
 - 4、具体要求要求见VLG质量文件VLG/JY8.2-08中第六条款规定。

| Name | Material | Color | Treatment | Amount | Remark |
|-----------|----------|-------|-----------|--------|--------|
| 3 端子 | 一代镀金端子 | | | 1 | |
| 2 RG113线材 | RG113线材 | 黑色 | | 1 | |
| 1 FPC | PI | 黑色 | | 1 | |

VLG 深圳市维力谷无线技术股份有限公司
Shenzhen VLG Wireless Technology Co., Ltd

| 第三角法 | 机种 | 品名 | 日期 | 页码 | 页码 |
|-------------|----------|----------------|------------|------|--------|
| 0~10 ±0.10 | DSGW-090 | BT天线成品 | 2022.05.28 | RF确认 | 1/1 |
| 10~20 ±0.15 | 料号 | V2183-004-A-05 | 绘图 | | |
| 20~40 ±0.20 | 材质 | | 品质审核 | | |
| > 40 ±0.25 | 表面处理 | | 结构审核 | | |
| | 外观处理 | | 单位 mm | 比例 | 批准 |
| | | | | | 版本 R.A |

序号 1 修改内容 版本 备注 收回:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|----------|---|---|---|
| | | | | 请勿实测图样位置 | | | |