

东莞市淼泰电子有限公司  
Dongguan MiaoTEC Electronics Co.,Ltd.  
承认书  
Specification For Approval

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| 客戶名稱<br>(CUSTOMER):    | 云卓科技有限公司                                                             |
| 品名<br>(DESCRIPTION):   | RF Antenna ASSEMBLY<br>1.13 Cable 黑色 L110mm + 2.4/5.8G FPC+IPEX PLUG |
| 客戶料號<br>(PART NO):     | TX0007                                                               |
| 料 號<br>(PART NO):      | 500101-00110-018R                                                    |
| 送樣日期<br>( DATE ):      | 2025. 02. 19                                                         |
| 版本<br>Revision:        | A1                                                                   |
| 承認號碼<br>(APPROVED NO): | MT. 承-250219-001                                                     |

CUSTOMER APPROVED BY

APPROVAL

CHIEF

SUPERVISOR

SUPPLIER SIGNATURE

APPROVAL

CHECK

DESIGN

东莞市森泰电子有限公司  
Dongguan MiaoTEC Electronics Co.,Ltd.

Spec Item

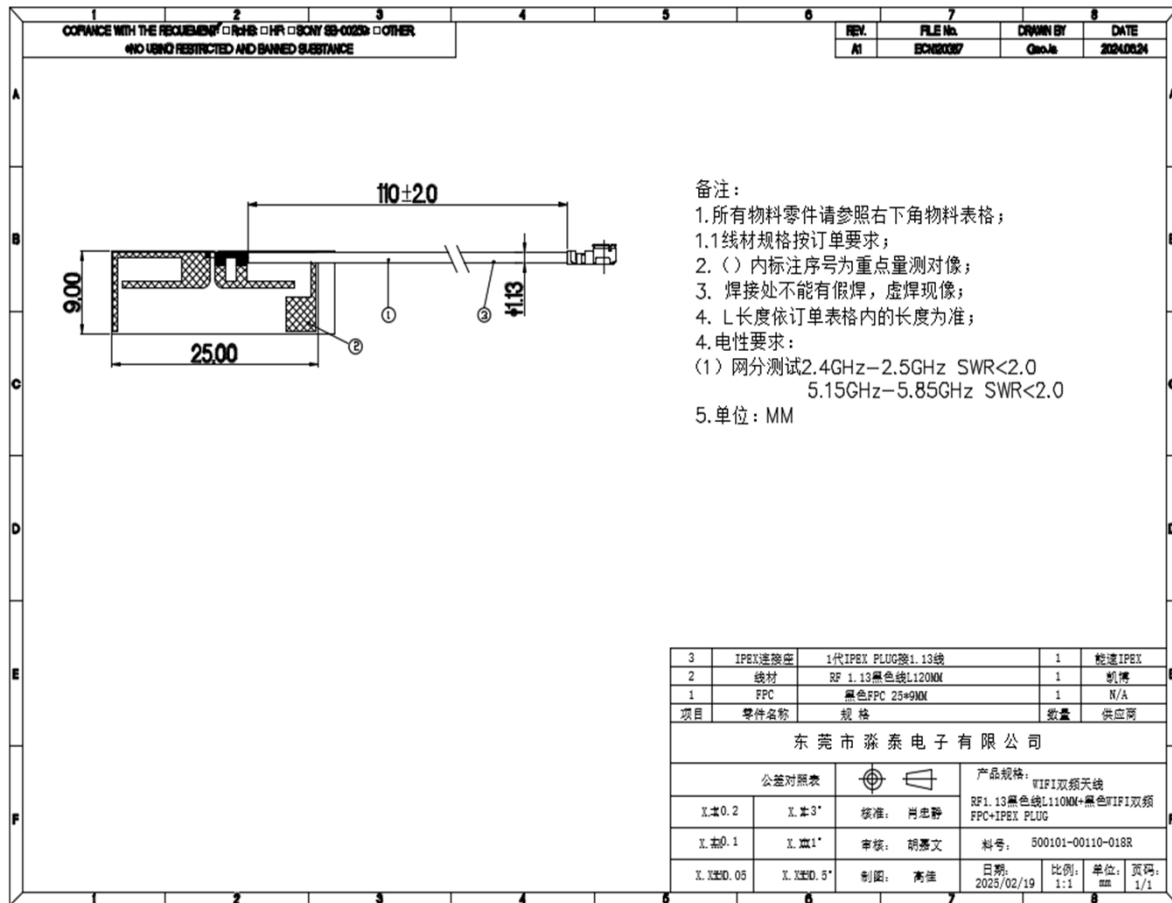
| NO | 项目 (Contents)                                      | Number of Page | PageCode | 备注 (Note) |
|----|----------------------------------------------------|----------------|----------|-----------|
| 1  | 封面 (Spec Cover)                                    |                |          |           |
| 2  | 目录 (Spec Item)                                     |                |          |           |
| 3  | 产品性能<br>(Electrical And Mechanical Specifications) |                |          |           |
| 4  | 产品规格图<br>(Prduct drawing)                          |                |          |           |
| 5  | 产品包装图<br>(Prduct Packing)                          |                |          |           |
| 6  | 产品尺寸检验报告<br>(Product Size Inspection Report)       |                |          |           |
| 7  | 材质证明<br>(Material proof)                           |                |          |           |
| 8  | UL证明<br>(UL proof)                                 |                |          |           |
| 9  | SGS报告<br>(SGS REPORT)                              |                |          |           |
| 10 | MSDS报告<br>(MSDS REPORT)                            |                |          |           |
|    |                                                    |                |          |           |

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| 电气参数 Electrical Specifications    |                 |              |
|-----------------------------------|-----------------|--------------|
| 频率范围 Frequency range (MHz)        | 2.4-2.5GHz      | 5.15-5.85GHz |
| 带宽 Bandwidth (MHz)                | 100MHz          | 700MHz       |
| 增益 Gain (dBi)                     | 4.54dBi         | 3.06dBi      |
| 半功率波瓣宽度 Half-power beam width(° ) | H:360      V:14 |              |
| 电压驻波比 VSWR                        | ≤2.0            |              |
| 输入阻抗 Input Impedance(Ω)           | 50              |              |
| 极化方式 Polarization                 | 垂直Vertical      |              |
| 最大功率 Maximum input power (W)      | 50              |              |
| 雷电保护 Lightning protection         | 直流接地 DC Ground  |              |
| 接头型号 Input connector type         | 1代IPEX PLUG     |              |
| 机械参数 Mechanical Specifications    |                 |              |
| 天线尺寸 Dimensions (mm)              | 见工程图            |              |
| 天线重量 Antenna weight (kg)          | 2g              |              |
| 工作温度 Operating temperature (℃)    | ~ 40-55         |              |
| 天线颜色 Antenna color                | White(黑色)       |              |
|                                   |                 |              |
|                                   |                 |              |
|                                   |                 |              |
|                                   |                 |              |
|                                   |                 |              |

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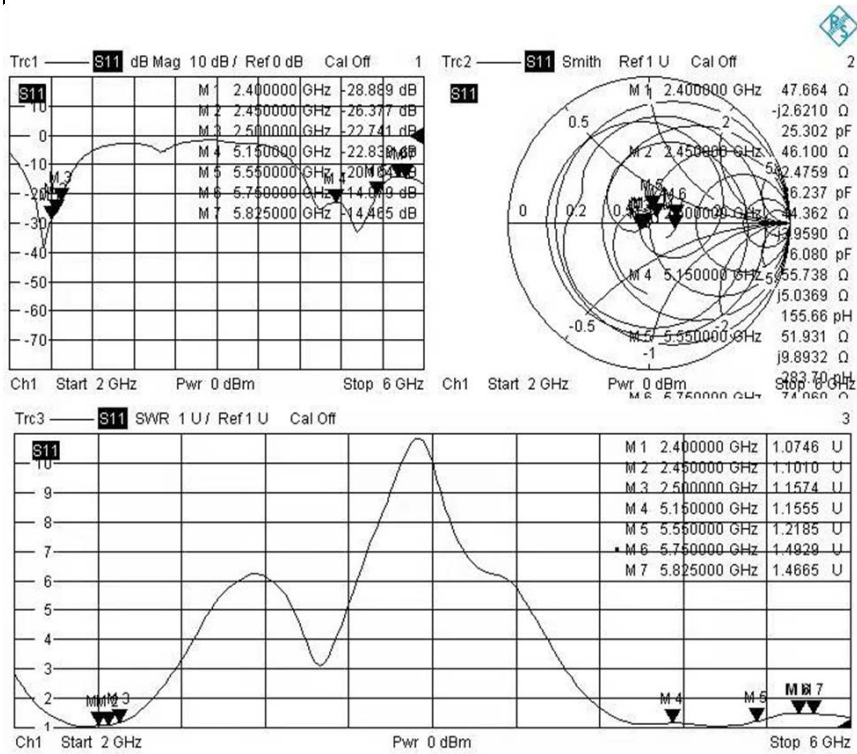
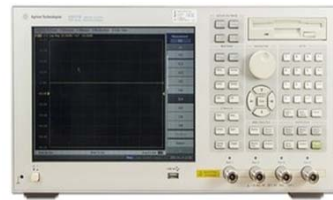
产品图纸  
Product drawing



东莞市森泰电子有限公司  
Dongguan MiaoTEC Electronics Co.,Ltd.

S Parameter Test

E5071B





|                   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| T90(H)圆度          | 15.95  | 17.44  | 16.32  | 14.01  | 12.53  | 11.72  | 11.11  | 10.57  | 9.87   | 8.88   | 7.96   | 2.12   | 2.28   | 2.79   | 2.78   | 1.74   | 1.79   | 1.99   | 1.92   | 2.03   | 2.10   | 2.35   | 3.06   | 3.38   | 3.56   | 4.42   |
| Gain 15deg (dBi)  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| E1(XZ)波瓣宽度        | 18.00  | 18.00  | 18.00  | 103.00 | 95.00  | 92.00  | 90.00  | 86.00  | 82.00  | 80.00  | 79.00  | 29.00  | 31.00  | 31.00  | 32.00  | 32.00  | 38.00  | 38.00  | 68.00  | 65.00  | 63.00  | 62.00  | 63.00  | 65.00  | 66.00  | 67.00  |
| E1(XZ)前后比         | 0.03   | 0.05   | 0.04   | 0.74   | 1.79   | 2.50   | 2.81   | 3.16   | 3.24   | 2.96   | 2.55   | 6.21   | 6.45   | 7.13   | 7.70   | 8.59   | 9.32   | 9.23   | 10.04  | 9.93   | 9.79   | 10.03  | 9.15   | 8.21   | 7.23   | 6.14   |
| E2(YZ)波瓣宽度        | 34.00  | 35.00  | 37.00  | 39.00  | 42.00  | 44.00  | 68.00  | 68.00  | 66.00  | 63.00  | 62.00  | 27.00  | 27.00  | 27.00  | 27.00  | 28.00  | 24.00  | 23.00  | 44.00  | 44.00  | 44.00  | 43.00  | 44.00  | 53.00  | 63.00  | 61.00  |
| E2(YZ)前后比         | 1.88   | 2.09   | 2.53   | 3.23   | 3.98   | 4.33   | 4.22   | 3.97   | 3.77   | 3.52   | 3.36   | 6.45   | 5.97   | 5.83   | 5.55   | 6.15   | 6.69   | 7.11   | 7.57   | 7.75   | 8.53   | 9.52   | 9.13   | 9.06   | 8.32   | 8.34   |
| 最大增益处轴比(P)        | 19.28  | 12.85  | 8.08   | 10.23  | 29.40  | 13.91  | 11.85  | 9.81   | 7.94   | 6.41   | 7.30   | 16.07  | 12.45  | 9.29   | 8.81   | 8.25   | 7.10   | 5.65   | 24.43  | 32.91  | 28.56  | 22.45  | 14.92  | 15.49  | 39.15  | 23.40  |
| 顶点(Theta=0)处轴比(P) | 2.21   | 0.61   | 3.82   | 6.99   | 9.53   | 11.20  | 12.58  | 14.58  | 17.21  | 23.41  | 46.14  | 7.68   | 20.86  | 47.16  | 21.00  | 25.95  | 11.87  | 7.80   | 3.80   | 2.89   | 4.41   | 9.15   | 12.39  | 12.85  | 11.23  | 8.79   |
| 仰角10度最差(大)轴比(P)   | 53.49  | 81.98  | 45.57  | 56.50  | 47.62  | 50.17  | 50.89  | 58.92  | 52.99  | 53.41  | 52.10  | 71.88  | 56.76  | 51.91  | 64.21  | 61.70  | 63.73  | 52.51  | 58.20  | 55.25  | 73.24  | 57.77  | 60.09  | 55.63  | 50.66  | 57.24  |
| Hc(XY)波瓣宽度        | 160.00 | 145.00 | 135.00 | 136.00 | 142.00 | 154.00 | 156.00 | 153.00 | 153.00 | 162.00 | 171.00 | 360.00 | 360.00 | 360.00 | 360.00 | 360.00 | 360.00 | 360.00 | 360.00 | 360.00 | 360.00 | 360.00 | 358.00 | 340.00 | 332.00 | 298.00 |
| Hc(XY)前后比         | 3.42   | 4.55   | 5.47   | 5.21   | 4.23   | 3.64   | 3.62   | 3.87   | 4.02   | 3.81   | 3.61   | 1.60   | 1.62   | 2.14   | 1.97   | 1.00   | 0.97   | 0.92   | 0.73   | 0.62   | 0.44   | 0.09   | 0.01   | 0.08   | 0.14   | 0.19   |
| 左旋圆极化效率(%)        | 39.92  | 38.97  | 37.89  | 37.76  | 34.94  | 35.47  | 37.06  | 38.99  | 39.04  | 37.33  | 37.35  | 31.56  | 32.77  | 35.08  | 35.88  | 38.03  | 37.91  | 38.66  | 40.58  | 41.75  | 42.13  | 40.13  | 41.84  | 40.63  | 41.62  | 36.16  |
| 右旋圆极化效率(%)        | 23.34  | 21.59  | 20.56  | 21.39  | 21.68  | 23.95  | 25.95  | 27.73  | 28.54  | 28.64  | 30.04  | 30.86  | 31.23  | 32.17  | 33.67  | 36.77  | 36.07  | 35.94  | 35.83  | 34.75  | 34.74  | 35.22  | 37.82  | 37.58  | 40.90  | 36.98  |

Line chart showing Efficiency (%) and Max-Min values for 20 different configurations. The Y-axis ranges from 0.00 to 100.00. The X-axis lists configurations from 1 to 20. Efficiency (%) is shown as a red line with circular markers, and Max-Min is shown as a purple line with circular markers. The Max-Min values are 56.62 for configuration 6 and 82.53 for configuration 20.

| Configuration | Efficiency (%) | Max-Min |
|---------------|----------------|---------|
| 1             | 63.00          |         |
| 2             | 60.00          |         |
| 3             | 58.00          |         |
| 4             | 59.00          |         |
| 5             | 56.00          |         |
| 6             | 56.62          | 56.62   |
| 7             | 62.00          |         |
| 8             | 66.00          |         |
| 9             | 67.00          |         |
| 10            | 66.00          |         |
| 11            | 67.00          |         |
| 12            | 62.00          |         |
| 13            | 64.00          |         |
| 14            | 67.00          |         |
| 15            | 69.00          |         |
| 16            | 74.00          |         |
| 17            | 73.00          |         |
| 18            | 74.00          |         |
| 19            | 76.00          |         |
| 20            | 76.00          | 82.53   |
| 21            | 74.00          |         |
| 22            | 79.00          |         |
| 23            | 77.00          |         |
| 24            | 79.00          |         |
| 25            | 75.00          |         |
| 26            | 79.00          |         |
| 27            | 82.53          | 82.53   |
| 28            | 72.00          |         |

