



惠州硕贝德无线科技股份有限公司

Huizhou Speed Wireless Technology Co.,Ltd

广东省惠州市仲恺高新区东江高新科技产业园惠泽大道 138 号

Ebony-G 天线项目认证报告

Customer/ Project	Ebony-G		Frequency Band	2400MHz~2500MHz 4900MHz~7125MHz	
SCT P/N	F-0Y-SV-0318-001-00		Version	V1.0	
Date	2023.08.08				
SPEED					
Checked by	RF	汤小俊	Designed by	RF	颜士武
	ME	徐 雷		ME	栗明亮
	QC		Remark		
Customer					
Date					
Confirmed by	RF				
	ME				
Remark					

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修订记录

Date	Revision version	Change Description	Author
2023.08.08	V1.0	初始版本	颜士武

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1 概述

此文档是 Ebony-G 天线的规格书。

此天线是 Ebony-G 天线的规格书，支持的频段是 2400~2500MHz、4900MHz~7125MHz。



图 1 Ebony-G 天线正面图片

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2 天线规格

天线形式	FPC+Cable 线
工作频段	2400MHz~2500MHz 4900MHz~7125MHz
天线增益	$\geq 3.0\text{dBi}$
天线效率	$>65\%$
端口驻波	<2.0
输入阻抗	50ohm
极化方式	线极化
轴比	N/A
辐射方向图	全向
馈电类型	同轴线馈电
功率容量	33dBm
天线尺寸(L*W*H)	36.0*12.0*0.3mm
重量	无要求
工作温度	-30 °C to +80 °C
存储温度	-30 °C to +80 °C

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3 天线测试环境

天线回波损耗、电压驻波比和隔离度的测试设备为 Keysight E5071C 矢量网络分析仪。如下图所示：



图 2 Keysight E5071C 矢量网络分析仪

天线的效率、增益以及方向图均由法国 Satimo 暗室测试得到。该暗室采用 64 个探头对天线的辐射性能进行电子扫描，采集数据，再通过电脑分析、整理，能够提供在 400MHz 到 7.5GHz 频段内的天线测试。



图 3 Satimo 暗室测试系统

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4 天线自由空间测试结果

4.1 天线电压驻波比

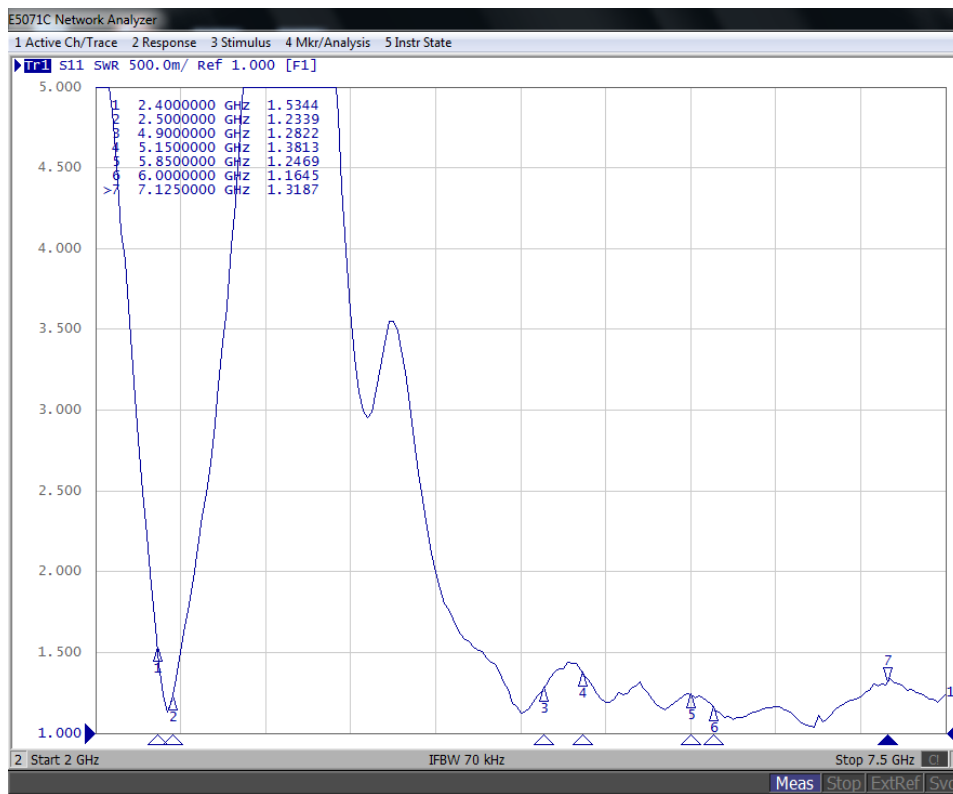


图 4 天线驻波图

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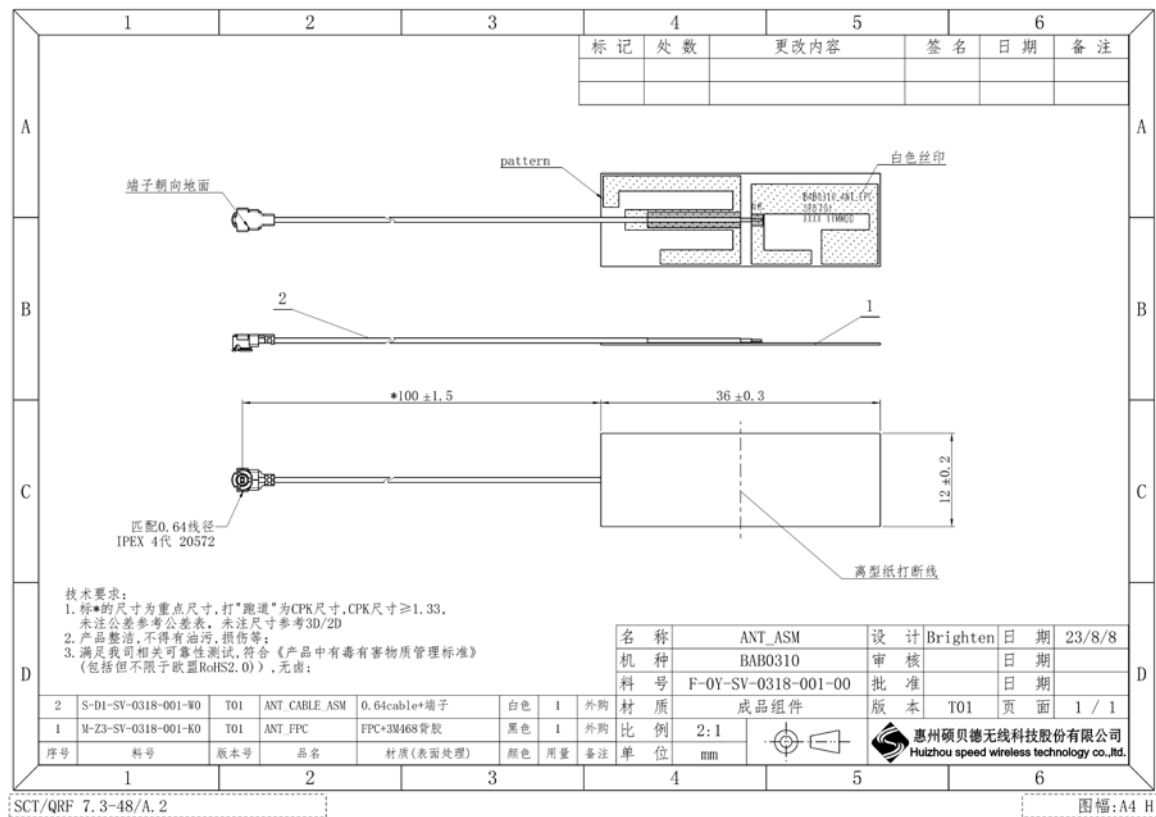
4.2 天线无源性能

Frequency (MHz)	Gain (dBi)	Efficiency	Frequency (MHz)	Gain (dBi)	Efficiency
2400	3.8	67%	6000	4.2	75%
2410	3.6	67%	6050	4.3	75%
2420	3.5	67%	6100	4.3	74%
2430	3.4	68%	6150	4.4	74%
2440	3.4	69%	6200	4.7	74%
2450	3.4	69%	6250	4.9	74%
2460	3.4	70%	6300	4.8	74%
2470	3.5	72%	6350	5.0	75%
2480	3.5	73%	6400	5.2	75%
2490	3.5	74%	6450	5.2	75%
2500	3.3	73%	6500	5.3	76%
4900	4.0	74%	6550	5.3	76%
4950	3.6	72%	6600	5.3	76%
5000	3.3	72%	6650	5.2	77%
5050	3.5	74%	6700	5.1	76%
5100	3.5	74%	6750	5.1	76%
5150	3.5	74%	6800	5.2	76%
5200	3.6	76%	6850	4.9	76%
5250	3.5	76%	6900	5.0	76%
5300	3.5	76%	6950	5.0	76%
5350	3.4	74%	7000	5.0	76%
5400	3.5	72%	7050	5.1	74%
5450	3.9	74%	7100	5.1	74%
5500	3.9	72%	7125	5.2	75%
5550	4.1	71%			
5600	4.4	75%			
5650	4.4	72%			
5700	4.7	72%			
5750	4.8	74%			
5800	4.7	73%			
5850	4.5	72%			
5900	4.2	73%			
5950	3.9	73%			

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5 天线结构图



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