



惠州硕贝德无线科技股份有限公司

Huizhou Speed Wireless Technology Co.,Ltd

Specifications For WiFi Antenna of Project G5-T3

Customer/ Project	G5-T3 WiFi Antenna		Frequency Band	2400-2500MHz	
SCT P/N	F-KY-31-0080-000-K0		Version	V3.0	
Date	2022.08.11				
SPEED					
Checked by	RF	TXJ	Designed by	RF	ZXX
	ME	XL		ME	SML
	QC			Remark	
Customer					
Date					
Confirmed by	RF				
	ME				
Remark					

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修订记录

Date	Revision version	Change Description	Author
2022.07.19	V1.0	Initial version	ZXX
2022.07.29	V2.0	Optimization antenna Version	ZXX
2022.08.11	V3.0	Latest antenna Version	ZXX

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1 Project Overview

This document is the specifications of the G5-T3 with WiFi antenna. The antenna solution is to make LDS wiring on the outside of the exterior surface bracket. The installation position is shown in Figure 1 :

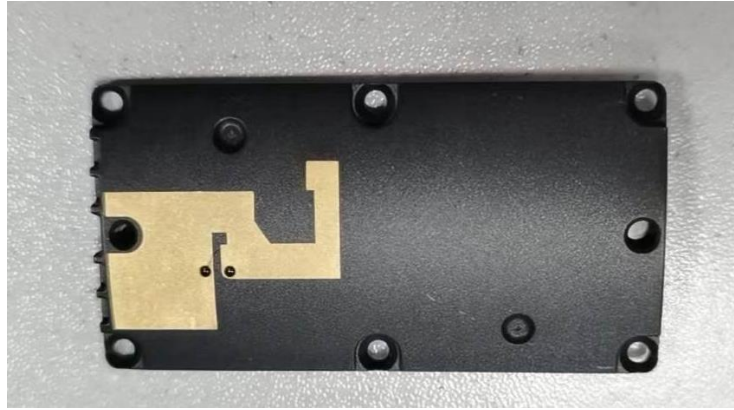


Figure 1 Antenna picture

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2 Antenna Specification

Antenna Form	Plastic Stent+LDS
Working Bands	2400~2500MHz
Peak Gain	N/A
Efficiency	>30%
VSWR	<2
Impedance	50ohm
Polarization	Linear polarization
A/R	N/A
Radiation Pattern	Omnidirectional
Feed Mode	Pin
power capacity	33dBm
Size(L*W*H)	58mm*30mm*4.3mm
Weight	N/A
Operating temperature	-30 °C to +80 °C
Storage temperature	-30 °C to +80 °C

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3 Test Environment

The measuring equipment for antenna return loss, voltage standing wave ratio and isolation is Keysight E5071C vector network analyzer. As shown below:



Figure 2 Keysight E5071C vector network analyzer

The efficiency, gain, and pattern of the antenna are all tested in a dark room at Satimo, France. The darkroom uses 64 probes to electronically scan the antenna's radiation performance, collect data, and then analyze and organize it through a computer, which can provide antenna testing in the 400MHz to 8.5GHz frequency.



Figure3 Satimo Darkroom

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4 Test Results

4.1 VSWR



Figure 4 VSWR

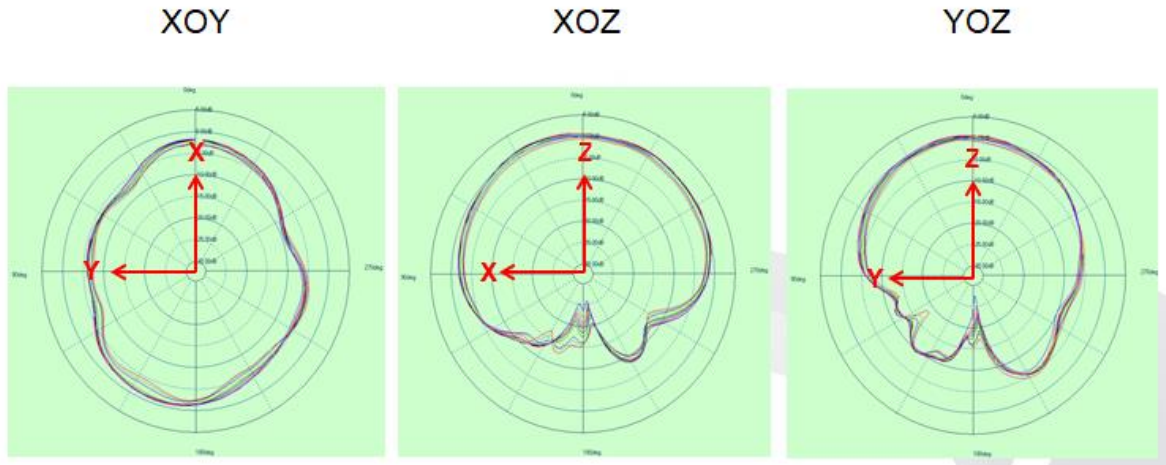
4.2 Passive Efficiency and Gain

Frequency(MHz)	Efficiency	Peak Gain (dBi)
2400	31.94%	0.29
2410	33.49%	0.32
2420	35.42%	0.48
2430	37.95%	0.60
2440	38.93%	0.77
2450	40.50%	0.95
2460	42.24%	1.04
2470	42.73%	1.15
2480	43.12%	1.25
2490	42.53%	1.40
2500	40.94%	1.11

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4.3 Antenna 2D pattern



5 Structure Diagram

1	2	3	4	5	6
DIMENSION		0-30	30-60	60-150	ANGLE
TOLERANCE		±0.1	±0.2	±0.6	±1.00°

REVISION RECORD (Please refer to sheet1 for details)					
Marks	QTY	Description	Name	Date	REV.

BAB0119 SPD
 YYMMDD-XXXX
 T03
 A
 3:1
 XXXX is the S/N
 YYMMDD is the Date code

NOTES:

1. THE DIMENSION MARKED WITH "*" IS THE KEY DIMENSION. NO TOLERANCE REFERENCE TABLE. NO DIMENSION REFERENCE 3D/2D
2. SCRATCH OR COLLISION DAMAGES ON THE SURFACE ARE NOT ALLOWED; NEED TO REMOVE ALL BURRS AND SHARP EDGES, CLEAN THE OIL POLLUTION;
3. ALL MATERIALS OF THE MODULE MUST MEET ROHS & REACH REQUIREMENTS.

3	M-WB-31-0090-001-50	T01	M1.6X0.35PX2.5H	C3604	6
2	M-Y8-B6-4208-001-00	T01	GLUE	Wellborn MU305	2
1	S-1C-31-0090-001-K0	T01	BAB0119_ANT_SUPPORT	Sabic DP002FVQ	1

Title	BAB0119_ANT_ASM	DRW.	Brighte	Date	22/8/10
Project	BAB0119	CHK.		Date	
P/N	F-0Y-31-0090-000-00	APP.		Date	
Material	BOM	REV.	T03	G/W	

Scale 1:1 Dimensions in mm
 Sheet 1 / 1
 Size A4
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 Huzhou speed wireless technology co., ltd.

1	2	3	4	5	6
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SCT/QRF 7.3-48/A.2 A4 H

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