

10G octagonal antenna

Specification V1.0

APPROVAL L G K 2024/03/15





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Manufacturer: Shenzhen Qianhai Homerun Smart Technology Co., Ltd. Address: Room 201, Building A, No.1 Qianwan 1st Road, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, Guangdong Province, China



1 Technical specifications

project	Specification
Frequency bandwidth	10.3GHz~11GHz
Return loss	-11dB
peak gain	4.8dBi
impedance	50Ω

2 Electrical specifications

S11







Figure 3 YZ plane Gain simulation diagram

Waiting for your suggestion at anytime.

Email: sales@eardatek.com





Figure 5 Antenna size diagram

Waiting for your suggestion at anytime.



4 Reference Design

1. The highlighted components in Figure 6 are impedance matching components with 0402 package specifications and require the use of high-precision components. Figure 7 Highlighted Line

The circuit is a feeder and needs to be designed according to 50ÿ.



Figure 7

2. The reference plate structure is shown in Figure 8.

JLC04121H-7628(通用推荐	字) JLC04121H-108	0 JLCC	4121H-3313	
编号	层别	叠层	各介质厚度	
	顶层线路		0.0350mm	
	压合PP (Prepreg)	7628*1	0.2104mm	
	中间线路1		0.0152mm	
JLC04121H-7628 (通用推 荐)	芯板	core	0.7000mm	0.7mm H/HOZ 不含 铜
	中间线路2		0.0152mm	
	压合PP (Prepreg)	7628*1	0.2104mm	
	底层线路		0.0350mm	

When drawing the antenna on the top layer, the middle line 1 needs to be hollowed out, the middle line 2 is used as the reference ground plane, and the transmission line is located on the bottom layer.



5 historical versions

Version of	reation date	overview	Editor
V1.0	2024-3-14 First	edition	Wanshun